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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1921.

Nos. 20-21, Original.

THE COMMONWEALTH OF PENNSYLVANIA,
COMPLAINANT,

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO, COMPLAINANT,

vs.

THE STATE OF WEST VIRGINIA.

COMPLAINANTS' TESTIMONY.

Witnesses.	Direct.	Cross.	Redirect.	Recross.
Quay, H. A.	4	59	146	170
Quay, H. A.	77	90	....	....
Sullivan, T. O.	183	227	303	....
Sullivan, T. O.	415	....	....	....
Corrin, John B.	316	337	355	....
Corrin, John B.	409	414	....	....
Wallace, H. A.	358	379	407	....
Tonkin, John B.	416	430	447	450
Tonkin, John B.	613	618	....	....
Freeman, W. W.	453	462	478	481
Reed, James H.	483	509	529	531
Angle, J. E.	533	555	....	....
Daly, Martin B.	563	590	611	612

JUDD & DETWEILER (INC.), PRINTERS, WASHINGTON, D. C., MAY 19, 1920.

Witnesses.	Direct.	Cross.	Redirect.	Recross.
Daly, Martin B	....	619	....	....
Jones, T. J	629	638	646	647
Jones, T. J	....	739	....	....
Denning, L. B	650	683	709	713
McMahon, J. W	716	726	738	....
Batchelor, G. F	741	....	....	....
Whitcomb, Eugene T	747	788	805	805
Anderson, J. K	808	831	856	858
Wyer, Samuel S	860	915	973	....

DEFENDANTS' TESTIMONY.

Nease, H. E	976	977	1073	1080
Nease, H. E	980	1038	....	....
Nease, H. E	1162	1175	....	....
Nease, H. E	1176	1188	....	....
Krebs, Chas. E	1083	1122	1133	....
Krebs, Chas. E	1192	1193	....	....
Lakin, J. S	1138	1155	1162	....
Cornwell, John J	1193	....	....	....
Wallace, H. A	....	1198	....	....
Robinson, B. F	1203	1210	1212	1214
Robinson, B. F	....	....	1323	....
Allman, W. C	1215	....	....	....
Coffman, I. Wade	1216	1217	....	....
Cunningham, R. T	1217	1232	1247	1250
Snaith, Chas. M	1252	1258	1270	1273
Short, Chas. A	1274	1283	1295	1296
Lewis, E. D	1297	....	....	....
Wilson, George W	1299	1301	1303	....
Horner, Vance L	1304	1314	1321	....
Bowser, Parke	1325	1333	1339	....
Devericks, F. C	1341	1351	1361	....

COMPLAINANTS' TESTIMONY IN REBUTTAL.

Witnesses.	Direct.	Cross.	Redirect.	Recross.
Robinson, Edwin	1372	1409	1414	1416
Wyer, Samuel S	1416	1427	1441	1443
Cummins, Robert W	1444	1447	1449	1455
Corrin, John B	1449	1452	....	....

DEFENDANTS' TESTIMONY IN SURREBUTTAL.

Witnesses.	Direct.	Cross.	Redirect.	Recross.
Nease, H. E	1460	1474	1477	1478
Krebs, Chas. E	1479	1483	1489	1490

Exhibits—Ohio and Pennsylvania.

Pennsylvania exhibit number		Offered in printed record at page	Offered by witness	Shown in this book at page
1	Map showing location of main transportation lines of the Manufacturers Light & Heat Company in Pennsylvania, Ohio, and West Virginia. (This was replaced by Pennsylvania Exhibit 39 E.)	30	Quay.....	1493
2	Warning letter sent by the Manufacturers Light & Heat Company to its industrial natural gas consumers, June 30, 1917.	149	Quay.....	1493
3	Warning letter sent by the Manufacturers Light & Heat Company to its industrial natural gas consumers, October 9, 1917.	149	Quay.....	1494
4	Warning letter sent by the Manufacturers Light & Heat Company to its industrial natural gas consumers, November 30, 1917.	149	Quay.....	1495
5	Warning letter sent by the Manufacturers Light & Heat Company to its industrial natural gas consumers, December 22, 1917.	149	Quay.....	1496
6	Warning letter sent by the Manufacturers Light & Heat Company to its industrial natural gas consumers, July 8, 1918.	149	Quay.....	1496
7	Warning letter sent by the Manufacturers Light & Heat Company to its industrial natural gas consumers, October 29, 1918.	149	Quay.....	1498
8	Warning letter sent by the Manufacturers Light & Heat Company to its industrial natural gas consumers, January 28, 1920.	149	Quay.....	1499
9	Application form for surplus gas from the Manufacturers Light & Heat Company, January 28, 1920.	157	Quay.....	1500
10	Application form for surplus gas from the Manufacturers Light & Heat Company, November 30, 1917.	157	Quay.....	1501
11	Application form for surplus gas from the Manufacturers Light & Heat Company, July 8, 1918.	157	Quay.....	1503
12	Requisitions by the Manufacturers Light & Heat Company on the Hope Natural Gas Company for gas service during 1919 and 1920.	158	Quay.....	1504
13	Number of domestic, industrial, and miscellaneous consumers and gas deliveries by the Manufacturers Light & Heat Company, at Bellaire, Ohio, from 1911 to 1919.	158	Quay.....	1506

Pennsylvania exhibit number		Offered in printed record at page	Offered by witness	Shown in this book at page
14	Sixty-three largest individual holdings of stock of the Manufacturers Light & Heat Company as of March 31, 1920.	179	Quay.....	1506
15	Map of the main lines of the Hope Natural Gas Company, the Reserve Natural Gas Company of West Virginia, and the Peoples Natural Gas Company of Pennsylvania as of December 31, 1917.	186	Sullivan..	1509
16	Contract between the Hope Natural Gas Company and the Northwestern Ohio Natural Gas Company, dated October 16, 1915.	224	Sullivan..	1509
17	Contract between the Hope Natural Gas Company and the Peoples Natural Gas Company, dated May 1, 1911.	225	Sullivan..	1524
18	Contract between the Reserve Natural Gas Company, Union Natural Gas Company, Hope Natural Gas Company, Connecting Gas Company, and T. N. Barnsdall, dated April 11, 1913.	225	Sullivan..	1535
19	Contract between the Hope Natural Gas Company and the East Ohio Gas Company, dated March 1, 1910.	225	Sullivan..	1544
20	Contract between the Mountain State Gas Company and the River Gas Company, dated April 1, 1910.	225	Sullivan..	1554
21	Contract between the Hope Natural Gas Company and Fayette County Gas Company, dated May 1, 1910.	225	Sullivan..	1560
22	Map showing natural gas property of the United Fuel Gas Company in West Virginia, Kentucky, and Ohio. (This was replaced by Pennsylvania Exhibit 39 D.)	360	Wallace..	1566
23	Map showing the natural gas property of the Philadelphia Company in Pennsylvania and West Virginia, January 1, 1920. (This was replaced by Pennsylvania Exhibit 39 F.)	486	Reed.....	1566
24	Map showing Fayette County Gas Company's natural gas system. (This was replaced by Pennsylvania Exhibit 39 A.)	534	Angle.....	1566
25	Outline map of main lines of the Natural Gas Company of West Virginia.	741	Batchelor.	1566
26	Map showing natural gas property of the Natural Gas Company of West Virginia, southern division.	746	Batchelor.	1566
27	Well production and gas leases controlled for year ending December 31, 1919, of natural gas companies in West Virginia.	814	Anderson.	1566

Pennsylvania exhibit number		Offered in printed record at page	Offered by witness	Shown in this book at page
28	Natural gas production statistics for year 1919 in West Virginia.	815	Anderson.	1566
29	Chart showing production and consumption of natural gas in West Virginia.	817	Anderson.	1567
30	Advance U. S. Geological Survey statistics on natural gas.	819	Anderson.	1567
31	Relation of operated and unoperated leaseholds to large and small companies in West Virginia.	822	Anderson.	1568
32	Domestic natural gas statistics for year 1918 from Geological Survey Report, domestic gas statistics from 1909 to 1919 from the Public Service Commission of West Virginia and domestic gas statistics of various companies in West Virginia.	823	Anderson.	1569
33	Estimate of monthly and yearly sales of natural gas in West Virginia.	824	Anderson.	1573
34	Comparison of maximum yearly consumption of natural gas for industrial consumers in the State of West Virginia for years 1915 to 1919, inclusive, with year 1918.	825	Anderson.	1576
35	Diagram showing how a given amount of gas can be contracted by application of pressure.	867	Wyer.....	1577
36	How natural gas is severed from the soil, brought under control and delivered into a fixed closed container.	870	Wyer.....	1578
37	How natural gas from West Virginia is transmitted to the consumer in another State.	871	Wyer.....	1579
38	Diagram showing action of natural gas compressor as used for compressing gas through transmission lines.	874	Wyer.....	1580
39A	Fayette County Gas Company map.....	876	Wyer.....	1581
39B	Hope Natural Gas Company map.....	876	Wyer.....	1582
39C	Reserve Natural Gas Company map.....	876	Wyer.....	1583
39D	United Fuel Gas Company map.....	876	Wyer.....	1584
39E	Manufacturers Light & Heat Company map	876	Wyer.....	1585
39F	Philadelphia Company map.....	876	Wyer.....	1586
39G	Carnegie Natural Gas Company map.....	876	Wyer.....	1587
39H	Eastern Oil Company map.....	876	Wyer.....	1588
40A	Daily actual and normal temperature at Parkersburg, West Virginia, in 1916.	893	Wyer.....	1589
40B	Daily actual and normal temperature at Parkersburg, West Virginia, in 1917.	893	Wyer.....	1590
40C	Daily actual and normal temperature at Parkersburg, West Virginia, in 1918.	893	Wyer.....	1591
40D	Daily actual and normal temperature at Parkersburg, West Virginia, in 1919.	893	Wyer.....	1592

Pennsylvania exhibit number		Offered in printed record at page	Offered by witness	Shown in this book at page
41	Volume of natural gas and per cent of State's total production exported from West Virginia.	895	Wyer.....	1593
42	One billion cubic feet of natural gas consumption per 1,000,000 population for West Virginia, Ohio, and Pennsylvania.	897	Wyer.....	1594
43	Total natural gas consumed annually per domestic consumer in West Virginia Ohio and Pennsylvania.	897	Wyer.....	1595
44	Industrial natural gas consumed annually per domestic consumer in West Virginia, Ohio and Pennsylvania.	897	Wyer.....	1596
45	Domestic gas consumed annually per domestic consumer in West Virginia, Ohio and Pennsylvania.	898	Wyer.....	1597
46	Map showing prinicpal towns outside of West Virginia depending on West Virginia for natural gas service.	904	Wyer.....	1598
47	Map of the main lines of the East Ohio Gas Company.	973	Wyer.....	1599
48	Map of the main lines of the Hope Natural Gas Company, Reserve Natural Gas Company and the Peoples Natural Gas Company.	974	Wyer.....	1600
49	Map of the Ohio Fuel Supply Company's system.	974	Wyer.....	1601
50	Natural gas statistics, West Virginia	1378	Robinson..	1603
51	Statement showing production and consumption, importation and exportation, of natural gas in West Virginia for year 1919.	1382	Robinson..	1605
52	Classification of consumption of natural gas in West Virginia for year 1919.	1382	Robinson..	1605
53	Ebert's statement on West Virginia natural gas production, importation, sales, and exportation for year 1920.	1383	Robinson..	1606
54	Statement showing approximate acreage held by certain companies and individuals in West Virginia.	1391	Robinson..	1608
55	Smithsonian Institution Bulletin on "Natural Gas Production, Service and Conservation."	1442	Wyer.....	1619

Ohio exhibit number		Offered in printed record at page	Offered by witness	Shown in this book at page
1	Map of main lines of the East Ohio Gas Company. (This was replaced by Pennsylvania Exhibit 47.)	564	Daly.....	1695

Ohio exhibit number		Offered in printed record at page	Offered by witness	Shown in this book at page
2	Map of main trunk lines and transmission lines of the Ohio Fuel Supply Company. (This was replaced by Pennsylvania Exhibit 49.)	651	Denning...	1695
3	Administrative order, Public Utility Commission of Ohio, relative to discontinuing gas to industrial consumers, December 15, 1916, Union Gas & Electric Co.	681	Denning...	1695
4	Administrative order, Public Utility Commission of Ohio, relative to discontinuing gas to industrial consumers, December 20, 1916, East Ohio Gas Co.	681	Denning..	1698
5	Administrative order, Public Utility Commission of Ohio, relative to discontinuing gas to industrial consumers, December 11, 1917, Union Gas and Electric Co.	681	Denning..	1700
6	Administrative order, Public Utility Commission of Ohio, relative to discontinuing gas to industrial consumers, December 19, 1916, Administrative order No. 28.	681	Denning..	1702
7	Administrative order, Public Utility Commission of Ohio, relative to discontinuing gas to industrial consumers, May 21, 1918, Administrative order No. 34.	681	Denning..	1703
8	Administrative order, Public Utility Commission of Ohio, relative to discontinuing gas to industrial consumers, June 10, 1919, Administrative order No. 41.	681	Denning..	1705
9	Administrative order, Public Utility Commission of Ohio, relative to discontinuing gas to industrial consumers, August 12, 1920, Administrative order No. 46.	681	Denning..	1706
10	Map of main lines of Logan Natural Gas & Fuel Company in Indiana and Ohio.	750	Whitcomb.	1709

Exhibits—West Virginia.

West Virginia exhibit number		Offered in printed record at page	Offered by witness	Shown in this book at
1	Gas purchase agreement: Hope Natural Gas Company and Manufacturers Light & Heat Company.	138	Quay....	Page 1712
2	Hope and L., F. and P. Co.'s agreement.	284	Sullivan.	" 1724
3	Pittsburgh, W. Va. & Equitable Co.'s agreement number 1.	529	Reed....	" 1729
4	Pittsburgh, W. Va. & Equitable Co.'s agreement number 2.	529	Reed....	" 1732

West Virginia exhibit number		Offered in printed record at page	Offered by witness		Shown in this book at
5	Pittsburgh, W. Va. & Equitable Co.'s agreement number 3.	529	Reed....	"	1733
6	Pittsburgh, W. Va. & Equitable Co.'s agreement number 4.	529	Reed....	"	1735
7	Monthly production report to Public Service Commission.	984	Nease....	Folio	268
8	Monthly transportation report to the Public Service Commission.	984	Nease....	"	269
9	Hope Report, Board of Public Works.	988	Nease....	"	270 to 288
10	Pittsburgh & W. Va. report, Board of Public Works.	988	Nease....	"	289 to 305
11	United Fuel Gas Company report, Board of Public Works.	988	Nease....	"	306 to 321
12	Reserve Gas Company report, Board of Public Works.	988	Nease....	"	322 to 336
13	Carnegie Natural Gas Company report, Board of Public Works.	988	Nease....	"	337 to 350
14	Columbia Gas & Electric Company report, Board of Public Works.	988	Nease....	"	351 to 364
15	Manufacturers Light & Heat Company report, Board of Public Works.	988	Nease....	Folio	365 to 378
16	Statement showing supply of natural gas produced and acquired within West Virginia by the Hope N. G. Co., Pittsburgh & W. Va. Gas Co., United Fuel Gas Co., Reserve Gas Co., Carnegie Gas Co., Columbia Gas & Electric Co., and Manufacturers Light & Heat Co., combined for seven Co.'s. NOTE.—This includes 16-A to 16-I.	995	Nease....	"	379 to 388
17	Statement showing acreage of natural gas territory held within W. Va. by the Hope Natural Gas Co., Pittsburgh & W. Va. Gas Co., United Fuel Gas Co., Reserve Gas Company, Carnegie Natural Gas Co., Columbia Gas &	998	Nease....	"	390 to 400

West Virginia exhibit number		Offered in printed record at page	Offered by witness		Shown in this book at
	Electric Co., and Manufacturers Light & Heat Co., combined for the seven companies. NOTE.—This includes 17-A to 17-K.				
18	Statement showing number of consumers within W. Va. furnished natural gas by the Hope Natural Gas Co., Pittsburgh & W. Va. Gas Co., United Fuel Gas Co., Reserve Gas Company, Carnegie Natural Gas Co., Columbia Gas & Electric Co., and Manufacturers Light & Heat Co., combined for the seven companies. NOTE.—This includes 18-A to 18-J.	1015	Nease....	"	402 to 412
19	Statement showing distribution of their net supply of W. Va. natural gas by the Hope Natural Gas Co., Pittsburgh & W. Va. Gas Co., United Fuel Gas Company, Reserve Gas Co., Carnegie Natural Gas Co., Columbia Gas & Electric Company, and Manufacturers Light & Heat Co., combined for the seven companies. NOTE.—This includes 19-A to 19-I.	1018	Nease....	"	414 to 423*
20	Chart showing consumption of natural gas for industrial purposes in W. Va., including gas sold in Maryland, 1914 to 1918.	1095	Krebs....	Folio	438
21	Chart showing consumption of natural gas for industrial purposes in W. Va., exclusive of Maryland, 1914 to 1918.	1095	Krebs....	"	439
22	Diagram of production and consumption of natural gas in State of Pennsylvania, 1914 to 1918.	1102	Krebs....	"	440

* The folio numbers jump from 423 to 438.

West Virginia exhibit number		Offered in printed record at page	Offered by witness		Shown in this book at
23	Chart showing consumption of natural gas for industrial purposes in State of Pennsylvania, 1914 to 1918.	1103	Krebs....	"	441
24	Diagram of production and consumption of natural gas in Ohio, 1914 to 1918.	1105	Krebs....	"	442
25	Chart showing consumption of natural gas for industrial purposes in Ohio, 1914 to 1918.	1106	Krebs....	"	443
26	Diagram of production and consumption of natural gas in Indiana, 1914 to 1918.	1107	Krebs....	"	444
27	Chart showing consumption of natural gas for industrial purposes in Indiana, 1914 to 1918.	1109	Krebs....	"	445
28	Diagram of production and consumption of natural gas in Kentucky, 1914 to 1918.	1110	Krebs....	"	446
29	Chart showing consumption of natural gas for industrial purposes in Kentucky, 1914 to 1918.	1111	Krebs....	"	447
30A	Map showing the location of gas pipe lines and compressor and measuring stations in W. Va.	1115	Krebs....	"	448
31	Diagram of production and consumption of natural gas in W. Va., including gas sold in Maryland, 1914 to 1918.	1121	Krebs....	Folio	449
32	Diagram of production and consumption of natural gas in W. Va., exclusive of Maryland, 1914 to 1918.	1121	Krebs....	"	450
33	Indenture by the Wheeling Natural Gas Co. and others to the Hope Natural Gas Co., June 27, 1911.	1171	Nease....	Page	1737
34	Indenture by the Mountain State Gas Co. to the Hope Natural Gas Co., April 1, 1910.	1173	Nease....	"	1737
35	Agreement, dated July 5, 1913, between United Fuel Co. and Louisville Gas & Elec. Co.	1199	Wallace..	"	1738

West Virginia exhibit number		Offered in printed record at page	Offered by witness		Shown in this book at
36	United Fuel Gas Co. and Portsmouth Co.'s agreement.	1199	Wallace..	"	1745
37	United Fuel Gas Co. and Central Ky. Co.'s agreement.	1199	Wallace..	"	1752
38	United Fuel Gas Co. and Ohio Fuel Sup. Co.'s agreement.	1199	Wallace..	"	1761
39	United Fuel Gas and Hope Natural Gas Co.'s agreement.	1199	Wallace..	"	1769
40	United Fuel Gas and Hope Natural Gas Co.'s agreement.	1199	Wallace..	"	1777
41	United Fuel Gas and Pittsburgh Co.'s agreement.	1199	Wallace..	"	1780
42	United Fuel Gas and Pittsburgh Co.'s agreement.	1199	Wallace..	"	1788
43	Columbia Gas & Electric and United Fuel Gas Co.'s agreement.	1199	Wallace..	"	1791
44	Columbia Gas & Electric and Ohio Fuel Supply Co.'s agreement.	1199	Wallace..	"	1800
45	Reserve Gas Co. vs. McKinley (condemnation proceeding).	1215	Allman..	"	1802
46	Hope Natural Gas Company vs. Rhodes (condemnation proceeding).	1217	Coffman.	Page	1821
47	Pittsburgh & W. Va. Gas Co. vs. Morrison (condemnation proceeding).	1217	Coffman.	"	1843
48	Philadelphia Co. of W. Va. vs. Curry (condemnation proceeding).	1217	Coffman.	"	1856
49	Carnegie Natural Gas Co. vs. Swiger (condemnation proceeding).	1217	Coffman.	"	1875
50	Fairmont & Grafton Gas Co. vs. Thompson (condemnation proceeding).	1217	Coffman.	"	1895
51	Wheeling Natural Gas Company vs. Tennant (condemnation proceeding).	1363	.....	"	1905
52	Highway franchises.....	1364	.....	"	1917
53	Hope Natural Gas Co. rate application.	1364	.....	"	1922
54	United Fuel Gas Co. rate application.	1364	.....	"	1929
55	Pittsburgh & W. Va. Gas Co. rate application.	1364	.....	"	1934

West Virginia exhibit number		Offered in printed record at page	Offered by witness		Shown in this book at
56	Reserve Gas Co. rate application.	1364	.....	"	1938
57	Reserve Gas Co. rate order...	1364	.....	"	1939
58	Manufacturers Light & Heat Co. rate application.	1365	.....	"	1940
59	Manufacturers Light & Heat Co. rate order.	1365	.....	"	1942
60	Pennsylvania Public Service Commission's orders.	1368	.....	"	1944

1 Supreme Court of the United States, October Term, 1919.

Nos. 23 and 24, Original.

THE COMMONWEALTH OF PENNSYLVANIA, Complainant,

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO, Complainant,

vs.

THE STATE OF WEST VIRGINIA.

Before Levi Cooke, Esq., Commissioner.

Hearings Commenced Tuesday, May 11th, 1920.

Appearances:

On behalf of the Commonwealth of Pennsylvania, A. Leo Weil, Esq.
On behalf of the State of Ohio, Attorney General John G. Price; Freeman T. Eagleson, Esq.
On behalf of the State of West Virginia, Attorney General Edward T. England; Fred O. Blue, Esq., George M. Hoffheimer, Esq., Philip P. Steptoe, Esq., W. S. John, Esq.

Chester F. Johnston, Reporter.

2 Pittsburgh, Pennsylvania, Tuesday, May 11th, 1920.

Pursuant to notice, the Commissioner and counsel met at the offices of Messrs. Weil & Thorp, Pittsburgh, Pa.

The Commissioner: Let the reporter lay on the transcript a copy of the Order of the Supreme Court of the United States in Cases Nos. 23 and 24, Original—October Term, 1919: The Commonwealth of Pennsylvania, Complainant, vs. The State of West Virginia, and The State of Ohio, Complainant, vs. The State of West Virginia; announced April 20th, 1920.

Order.

"On consideration of the respective motions of the complainants for the appointment of a Special Master and of the defendant for the appointment of a Commissioner to take the testimony and report the same to the Court and of the motions to consolidate the cases for the purpose of taking such testimony,

"It is now here ordered that the motions to consolidate the cases for the purpose of taking the proofs be, and the same are hereby, granted.

3 "It is further ordered that Mr. Levi Cooke, of the District of Columbia, be, and he is hereby, appointed a Commissioner to take and return the testimony in these causes, with the powers of a Master in Chancery, as provided in the Rules of this Court; but said Commissioner shall not make any findings of fact or state any conclusions of law.

"It is further ordered that the complainants shall take their evidence, at such place or places as they may indicate, between the first day of May, 1920, and the first day of October, 1920, upon giving ten days' notice of the time and place of taking such evidence to the counsel for the defendant; that the defendant may take evidence, at such place or places as it may indicate, between the first day of October, 1920, and the first day of March, 1921, upon giving ten days' notice of the time and place of taking such evidence to the counsel for the complainants; that the complainants shall take their evidence in rebuttal between the first day of March, 1921, and the first day of April, 1921, at such place or places as they may indicate, upon giving ten days' notice to counsel for defendant, and

4 the defendant shall then conclude the taking of its evidence in sur-rebuttal on or before the first day of May, 1921, upon giving ten days' notice of the time and place of taking such evidence to the counsel for complainants. Provided, however, that if complainants shall conclude the taking of their evidence in chief before the first day of October, 1920, and shall give notice thereof, the time for the taking of evidence in chief on the part of defendant shall begin to run fifteen days after the giving of said notice by the complainants; and if the defendant shall conclude the taking of its evidence before the first day of March, 1921, and shall give notice thereof, the thirty-one days' time for the taking of evidence in rebuttal on behalf of the complainants shall begin to run fifteen days after the giving of said notice by the defendant and the thirty days' time for the taking of evidence on behalf of defendant in sur-rebuttal shall begin to run from the termination of said thirty days allowed for the taking of the evidence in rebuttal by the complainants; but nothing in this proviso contained shall operate or be construed to postpone the ultimate dates for the commencement

5 of the time for the taking of the defendant's evidence in chief, the complainants' evidence in rebuttal and the defendant's evidence in sur-rebuttal, respectively, first above specified.

"It is further ordered that the said complainants and the defendant, respectively, shall make such deposits with the Clerk of this Court for fees, costs and expenses of the said Clerk and of the said Commissioner as they may from time to time be requested by said Clerk."

The Commissioner: Pursuant to the foregoing order, and following notice given by Mr. A. Leo Weil, counsel for The Commonwealth of Pennsylvania, as of May 1st, 1920, the Commissioner for

the Court is present, and the hearing will be opened jointly on behalf of The Commonwealth of Pennsylvania and The State of Ohio.

(NOTE.—It is stipulated and agreed between the counsel representing the respective parties that the sessions at the present time, and until otherwise agreed, shall begin at 10:00 o'clock A. M. and continue until 12:30 P. M.; that a recess shall then be taken
6 until 1:30 o'clock P. M., when the hearing shall be resumed and continue until 3:30 o'clock P. M.

It is also agreed that the testimony at this time shall be taken by Chester F. Johnston, or under his direction, as stenographer, who shall furnish an original and at least six copies; the price to be paid for the original copy and services of the stenographer to be fifty cents (50¢) per page, to be paid by the party taking the testimony and to be charged as a part of the costs of the case; one copy to be furnished to the counsel representing the State of Ohio, two copies to the counsel representing the State of Pennsylvania, and three copies to the counsel representing the State of West Virginia; each of said parties paying for their copies twenty cents (20¢) per page.

It is further agreed that the Commissioner be requested to arrange, if possible, to have the testimony printed through the Clerk's Office of the Supreme Court of the United States, in Washington, in accordance with the Rules of that Court, so as to retain fifty (50) copies for ultimate filing with the Court, fifty copies (50 copies) each to be furnished to counsel representing The State of West Virginia and jointly to counsel representing The State of Ohio
7 and The Commonwealth of Pennsylvania. It is further agreed that the costs of printing shall be advanced by the respective sides taking the testimony from time to time by deposits with the Clerk of the Court, and ultimately, the whole cost of printing to be taxed as costs in the cases.

It is further agreed that the notices to take testimony to be given in accordance with the order of the Court, be given as follows: To the State of Ohio, by notice to Attorney General John G. Price, Columbus, Ohio; to The Commonwealth of Pennsylvania, to A. Leo Weil, Esq., 821 Frick Building, Pittsburgh, Pa.; to The State of West Virginia, to Hon. Edward T. England, Attorney General, Charleston, West Virginia. The notice to these respective parties being sufficient as notice to all counsel).

A recess was here taken until 1:30 o'clock P. M.

8 Tuesday Afternoon.

(May 11th, 1920.)

And now, the hour of 1:30 o'clock P. M. having arrived, hearing resumed pursuant to adjournment, at the offices of The Peoples' Natural Gas Company, Pittsburgh, Pa.

HARRY A. QUAY, a witness produced on behalf of complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Weil:

Q. Mr. Quay, what is your present occupation?
A. I am General Manager for the Manufacturers Light & Heat Company.
Q. How long have you occupied that position?
A. Since a year ago last February.
Q. And prior to that time?
A. I was Assistant General Manager for a period of eight months, approximately.
Q. Of the same company?
A. Of the same company.
Q. And prior to that time, give your various positions in connection with the gas industry.
A. Prior to that I occupied the position of District Man-
9 ager for a period of perhaps three years.
Q. That is, for the same company?
A. For the same company. Prior to that time I was General Foreman for a period of two or three years, for the same company. Previous to that time I was what is known as Chief Inspector for the same company. I first started to work for gas companies in Meadville, Pennsylvania.
Q. What year?
A. It was about the year 1895—1894 and 1895. The company was known at that time as the Oil City Fuel Supply Company. Later on I began work for the East Ohio Gas Company, at Massillon and at Canton, Ohio. There I was given special training on inspecting, work of that nature. I went back to work again for the Oil City Fuel Supply, inspecting towns supplied by them, which includes Oil City, Meadville, Titusville, Franklin, Brookville, Dubois. During my term as inspector I also worked for the Iroquois Natural Gas Company at Buffalo, New York, Hamburg, New York, and other towns which that company supplied. I also worked for The People's Natural Gas Company, which supplies gas in Pittsburgh, Wilkinsburg, Greensburg, Latrobe and various other towns on their system. I also worked for the East Ohio Gas Company in Cleveland, Akron, Canton, Canal Dover, Uhrichsville and New Philadelphia, and various towns on their system. I also worked for the Northwestern Natural Gas Company at Toledo, Ohio, Maumee and
Perrysburg, and towns on their system. I also worked for
10 the Pennsylvania Gas Company at Corry, Warren, Jamestown, New York, and some eight or ten other smaller towns on their system. I also worked for the River Natural Gas Company, which supplies gas at Marietta, and other towns on their system. I also done work for the Mountain State Gas Company, who at that time supplied Sistersville, Parkersburg, and various other towns on their system.

Q. In West Virginia?

A. In West Virginia. I also done work for the Hope Natural Gas Company in the territory they had, two or three times in the State of West Virginia. And various other companies—the Clarksburg Light & Heat, and the Keener Oil & Gas Company, and the South Penn Oil Company.

Q. According to the dates you have given, you have been in the natural gas business about twenty-five years?

A. From twenty-five to twenty-seven years.

Q. Are you familiar with all the various departments and activities of the natural gas business and the supply of natural gas to consumers by natural gas companies?

A. In a general way, yes, sir.

Q. What are your duties, as General Manager of the Manufacturers' Light & Heat Company, in a general way?

A. My duties as General Manager would more pertain to the operations, developments, and so forth, of the company.

Q. Is it a part of your duties as General Manager to look
11 after their gas territory and the drilling of same and the operation of wells?

A. Yes, sir.

Q. Are you familiar with the territory now owned by the Manufacturers' Company?

A. Yes, sir.

Q. And of its wells?

A. Yes, sir.

Q. Adopting, for convenience, the date as of January 1st, 1920, state what gas territory the Manufacturers' Light & Heat Company owned in the State of West Virginia.

A. The Manufacturers' Light & Heat Company have under lease in the State of West Virginia approximately 147,000 acres.

Q. And how much gas territory have they under lease, or do own, in Pennsylvania?

A. They have approximately, in Pennsylvania, 180,000 acres; that is approximately.

Q. And how much in Ohio?

A. In Ohio about 15,000 acres, I would say, approximately.

Q. Do they own gas territory in any other States?

A. We have territory under lease in the States of Texas, Louisiana, and Arkansas and Oklahoma and Kentucky, and a little acreage in Kansas. We have, all told, an acreage approximating 350,000 acres.

Q. Is the territory last described by you, in what I will call
12 the West, tributary to the markets of the Manufacturers' Company in Pennsylvania, Ohio and West Virginia, and vicinity?

A. As far as they pertain to the natural gas part of the company, they are not.

Q. How much of the territory held under lease by the Manufacturers' Company in West Virginia is what you would call developed territory?

A. I would say, roughly, that about half of that. I don't recollect definitely the figures. I can secure them, though.

Q. Well, give it to us in acreage.

A. I would say about, possibly 75,000 acres.

Q. And how much in Pennsylvania?

A. I would say probably 85,000; perhaps a little more.

Q. And how much in Ohio?

A. I would say not to exceed 1,000 acres.

Q. How many wells, gas wells, have you on your property in West Virginia?

A. I think 457 gas wells.

Q. And how many in Pennsylvania?

A. Some few over 700.

Q. And how many in Ohio?

A. I think in Ohio there is 10. Those are approximate figures. I can give you the correct amount, if I refresh my memory (consulting memorandum).

13 Q. Well, if you have any data from which you can refresh your recollection, give us the numbers more accurately.

A. In West Virginia, as of December 31st, 1919, we have 461 gas wells; in Pennsylvania, we have 764 gas wells, and in Ohio, 10.

Q. What was the amount of the gas production of the Manufacturers' Company about the same date, from its own wells?

A. Our own production?

Q. In each of the States named?

A. Our own production in the State of West Virginia was five billion and approximately seven hundred million.

Q. Per annum?

A. Per annum. That is for the year 1919.

Q. And in Pennsylvania?

A. Approximately 6,500,000,000.

Q. And in Ohio?

A. About 300,000,000.

Q. How much of this, in accordance with my question, is gas produced by the Manufacturers' Company?

A. The figures given you is the amount of gas which the company produced itself. It doesn't include purchased gas.

Q. Now, then, how much gas was purchased by the Manufacturers' Company in West Virginia in 1919?

A. We purchased in the State of West Virginia approxi-

14 mately 13,500,000,000.

Q. All of these figures you are giving, of course, are cubic feet?

A. Cubic feet.

Q. And how much in Pennsylvania?

A. Approximately about—roughly, 900,000,000 cubic feet.

Q. And how much in Ohio?

A. About 100,000,000 cubic feet.

Q. Was that quantity that you have given as purchased, from all sources?

A. All sources.

Q. State in a general way—general description, without going into details—what those sources were.

A. The major portion of the gas purchased by the Manufacturers' Light & Heat Company was secured from the Hope Natural Gas Company, a large producer in the State of West Virginia. The amount of gas which they delivered to the Manufacturers' Company is equal to the sales, total sales, of the Manufacturers' Company, for the year, plus 6 per cent.

Q. Sales to whom?

A. To the Manufacturers' domestic consumers. I mean by that this way: We take the total amount of gas, for instance, sold to our domestic consumers over our entire system in the States of West Virginia, Pennsylvania and Ohio, during the year 1919.
15 The amount deliverable from the Hope for the following year is that amount of gas plus an additional 6 per cent, which is supposed to cover new consumers, new growth to our plant—natural growth.

Q. From whom?

A. The balance?

Q. Yes.

A. Two billion or so, it is bought, I suppose, from a total of perhaps over one hundred other individuals, companies.

Q. What is the total number of consumers of the Manufacturers' Company, as of December 31st, 1919, or the first of January, 1920?

A. We had approximately 116,500 consumers.

Q. Is that both domestic and industrial?

A. That includes all consumers.

Q. How many of those were domestic?

A. The number of domestic consumers participating in the earnings, as of December 31st, 1919, was approximately 112,000.

Q. And how many industrial?

A. Industrial consumers' contracts, we have about 385—388.

Q. What other consumers have you besides industrial and domestic?

A. We have a class designated under the title of "Miscellaneous." That refers particularly to gas used, for instance, by the company on its compressing stations, for its own use; or gas sold for
16 drilling purposes, and to churches and some hospitals, are in that classification.

Q. Any to municipalities?

A. We sell to practically every municipality in which we serve the public. We have contracts with the State of West Virginia. We also have a contract with the State of Pennsylvania for supplying gas to the Boys' Industrial Home, known as Morganza. The sales last year to them ran something close to 90,000,000 cubic feet. I recollect the highest amount we had, which I think was January, 1919, was something like 15,000,000 feet, or a little over 15,000,000 feet that month. We have in that list 17 contracts, I believe, with the United States Government for supplying gas to Government dams along the Ohio River. And we have a great many contracts with the United States Government for supplying gas to various post-

offices in the various towns that we serve in the three States. In addition to that, there are some eight or ten contracts covering gas sold to counties—for instance, like Allegheny County here—for their use.

Q. And what do they use it for, in a general way—the County?

A. Well, mostly in their institutions. They have some gas engines; for laundry purposes, cooking and lighting, and so forth, general purposes.

17 Q. In State institutions, or County institutions?

A. Yes, sir.

Q. What was the total number of consumers that you gave us a moment ago, including all?

A. The total number, approximately 116,500.

Q. Now, of that number, how many are in West Virginia?

A. In West Virginia there are approximately 11,000—some few over 11,000.

Q. And in Pennsylvania?

A. In Pennsylvania there is approximately 75,000.

Q. And how many in Ohio?

A. In Ohio, about 26,000. You will note, if you undertake to make the figures balance, that I have stated that in the domestic consumers there was approximately 112,000 which participate in the December earnings, as of December 31st. You are perhaps not aware of the fact that where you have a large number of consumers there are several thousand whom you are unable to read, due to the fact that they are absent from home. Now, those that were not read, or did not show an earning, are not included in the figures given you, of 112,000. The 112,000 are the domestic consumers who participate in an earning.

Q. What was the total amount of gas supplied to all consumers by the Manufacturers' Company in the year 1919?

A. The total sales of the company in 1919 were a little over

18 27,000,000,000 cubic feet.

Q. And how much of that was supplied in West Virginia?

A. In West Virginia, approximately five billion, say four hundred million.

Q. And how much in Pennsylvania?

A. Approximately 15,800,000,000.

Q. And how much in Ohio?

A. Approximately six billion, and say three hundred million.

Q. That included domestic, industrial and miscellaneous?

A. Yes, sir, that was all sales.

Q. Now, of that amount, can you give us how much of that supplied in West Virginia was supplied to domestic consumers?

A. In West Virginia the company sold approximately 1,084,000,000 cubic feet to their domestic consumers.

Q. And how much to domestic consumers in Pennsylvania?

A. Approximately 7,966,000,000 cubic feet.

Q. And how much in Ohio?

A. Approximately 2,600,000,000 cubic feet.

Q. The remainder, then, of the totals that you have given us, I presume, would be supplied to industrial and miscellaneous?

A. Yes, sir.

Q. Can you separate those for us also?

A. In West Virginia the company sold approximately 3,300,000,000 cubic feet for industrial purposes. The company sold in the State of Pennsylvania approximately 5,700,000,000 cubic
19 feet for industrial purposes; and in Ohio, approximately 3,700,000,000 cubic feet for industrial purposes.

Q. And how much for miscellaneous?

A. In West Virginia, the company sold approximately 1,000,000,000 cubic feet for miscellaneous use, and in Pennsylvania about 1,600,000,000 cubic feet for miscellaneous use. And in Ohio, about 100,000,000 cubic feet for miscellaneous use.

Q. As a part of your duties as general manager, what do you say as to its being necessary for you to become advised and keep advised as to all the various gas fields in West Virginia, Pennsylvania and Ohio, and in other States adjacent thereto, the gas of which might be used for transportation into the territory supplied by your lines?

A. I would consider that it is a very important part of my duties to keep in touch with territory which does produce gas or which might be capable of producing gas; more particularly in the districts adjacent and intermixed with territory which my company has.

Q. Do you keep so advised?

A. Yes, sir.

Q. What do you do where you hear of a new territory being taken up, or wells being drilled, anywhere in Ohio or Pennsylvania or West Virginia, or in any of the States adjacent thereto?

A. About the first thing that is done, and done quickly, is to have one or more men from your leasing department go to the
20 neighborhood and attempt to and secure leases for property in that vicinity.

Q. Then what do you do?

A. If the developments warrant it, of course we start operations on the same.

Q. Do you keep advised as to what the result is of developments by anybody or any company?

A. Our various field foremen mail to our office each week a report as to all operations by other companies or other individuals in the same districts which we operate in.

Q. What about "wildcat" operations in other sections?

A. As soon as we become aware of the fact that there is a "wild cat," or a well designated as a "wild cat well," located so that the product will be available for the use of the Manufacturers' Company, as I state, we generally attempt and do secure acreage in the vicinity. Of course, it is of interest to all of us to know what the result of their exploration is. If they secure a well—of course, depending on how large, what value—why, we start operations, providing, of course, we are justified.

Q. So as to save time hereafter, will you explain what you mean by a "wild cat well"?

A. The natural gas industry is a very hazardous business, well termed by some a gambling business, due to the uncertainty of results. The nature of the business is such that you can drill
21 a well in very close proximity to one that is producing large quantities of gas, and still your well be dry. A well drilled in the neighborhood or vicinity of producing wells is not considered a "wild cat," but if you should go out some distance from any producing territory and drill a well for the purpose of ascertaining whether there is any gas or oil in the sand, that is known as a "wild cat well." In other words, it is a much wilder venture than the ordinary drilling of a well.

Q. Is natural gas found in the same sand in different sections and in different States, or is it found in various stratifications?

A. Gas is found in various sands, not only in the same States, but in the same fields, in the same localities. Gas may be found in one sand, and a well a reasonable distance from it be drilled and gas not found in that sand, but found in some other sand perhaps.

Q. How do you determine the presence of gas in any territory, or field?

A. The only way that the presence of gas can be determined at all is by the erecting of a derrick or rig and the puncturing of a hole in the earth. That is the only way of determining whether there is gas at that particular spot or not.

Q. And drilling down into the various gas-bearing sands?
22 A. Yes, sir.

Q. There is no other way that has ever been discovered by the trade, is there?

A. None that I know of. I would like to know the way, if there is one.

Q. What do you say as to the localities in the country, as a whole, in which natural gas has been found?—as to its being a large number of territories or in a comparatively small number?

A. Natural gas is found in a comparatively small number of places.

Q. How is that, even as to the States of Pennsylvania, Ohio, and West Virginia?

A. They are small and separated.

Q. That is the various fields?

A. The various fields are.

Q. Have you made any calculations as to, for example, the proportion of the area of West Virginia and Pennsylvania and Ohio respectively, in which natural gas has been found?

A. I have never made any figures, but it is a small portion of that total area.

Q. A small portion of each State?

A. Yes, sir, that has known producing gas territory.

Q. After you have discovered gas, after the well has been drilled what, if any, methods are known to the trade whereby the
23 quantity thereof can be ascertained or determined prior to the actual production?

A. There is no way that I know whereby the actual production of a well can be ascertained before gas has been discovered.

Q. Well, after it has been discovered, and before the well has been producing long enough to practically exhaust the gas in that particular well or territory, is there any way of ascertaining what quantity of gas will be obtained from any given territory, or even from any given well?

A. Attempts have been made to determine the amount of gas available. One method adopted is by taking the original rock pressure that was shown at the time the discovery—or the first well perhaps was drilled in that locality; taking the same rock pressure at the present day and the difference in the rock pressures as of the present day and the day that the well first came in will give, in a general way, the amount of the gas that you have taken out, provided, of course, you know the amount of gas that well has produced. I mean by that, should your original rock pressure show 100 pounds, and your present day rock pressure show 50, you would say roughly, that half the gas that is confined down in the bowels of the earth—or in this case the producing strata—would be half gone. If your original rock pressure was 100 pounds and your present rock pressure 25 pounds, you would say, roughly,
24 that 75 per cent of your gas has been utilized, 25 still remaining in the ground.

Q. Can you tell, when the well has been drilled and before you have taken out the gas, as you have described, what quantity of gas you are going to be able to take out of any given well or territory?

A. No. You can tell roughly what it is doing at that particular time that the test is taken.

Q. I don't mean that. Is it not the fact, with reference to this computation on the basis of pressure, that many wells with large pressure produce a comparatively small quantity of gas, while a well with a low pressure produces a very much larger quantity of gas?

A. There are wells with what is styled high rock pressure that only have a capacity of putting out a small amount of gas. On the other hand, there are wells with a small rock pressure, or a smaller rock pressure, that put out much larger quantities of gas.

Q. And to what is that due?

A. That is due to the hardness of the sand perhaps; that retards the flow, or it might be that the gas isn't there.

Q. This hardness of sand, or the degree of hardness, is termed by the trade, the porosity of the sand, is it not?

A. By some, yes, sir.

Q. After a field has been discovered, and drilling operations undertaken in that particular field, is there any way
25 of ascertaining except, by the actual drilling of a well, whether you will get any gas or not in the particular well, or what quantity of gas you will get in that well, even where it is drilled in the same field and in proximity to other wells?

A. There is not.

Q. How does this gas come to the surface—what brings it to the surface?

A. The gas is confined in the levels or sand between the strata of earth, producing sand, and is confined there under pressure. As long as a well isn't drilled or a hole punctured into that reservoir, of course the pressure remains the same. If you drill your hole, or, in other words, puncture your hole down through until your reach that gas-bearing sand, that force drives the gas from the sand out up at the top of the hole; the compression under which the gas is confined forces the gas to the top of the hole.

Q. Is this pressure affected by the exhaustion of the gas in the sand or the——

A. The pressure is affected directly according to the amount of gas which is taken out of the well.

Q. What is the fact, as to being affected by the drilling of other wells in the same section?

A. Every thousand cubic feet of gas that is taken out
26 through that particular well, or any other wells in that same strata, naturally reduces the pressure.

Q. And what effect, if any, does water or oil have?

A. That has the same effect, of restricting the flow of gas from the gas strata, the gas-bearing strata, to the mouth of the well. And, in some instances, it goes further. That is, enough oil or water will collect in your well so as to completely stop the flow of gas up through that particular well.

Q. What is the fact as to wells being affected in their pressure and production by many causes still undiscovered and unknown to the trade?

A. There are other causes that of course restrict the flow of gas and lessen it. Some wells salt up. In fact, it is pretty hard to tell sometimes what is occurring.

Q. Isn't it the fact that the production of gas from a well in any field that has yet been discovered is entirely problematical, and is affected from time to time by all sorts of causes, some of which are known and some unknown to the trade?

A. I would say that the life of a well is very uncertain. There are many things that can happen which will stop the flow of the gas—reduce the flow of gas, or make it necessary to abandon the well completely.

Q. What has been the experience of the trade so far, as to
27 the necessity, after gas has been found and wells drilled, to find a market for the same, to avoid loss?

A. It has been the custom of all companies that I know of, to sell as large amounts of gas as possible. In practically all gas fields there is more or less competition; and the belief is that if you don't sell the gas, your competitors draw on that territory and sell it, and that you had better sell your gas, what you can, before the other fellow sells it. Competition has been so keen that we have always attempted to sell practically all the gas drilled. Years ago, when there was not

the demand for natural gas that there is today, there was a large surplus amount of gas, and we made great efforts to find markets for the gas and dispose of it. I don't wish to imply that those same conditions still apply to the present day.

Q. What has been your experience as to the practicability of drilling gas wells and shutting them in and not using them, and afterwards, in using them, find that there has been a loss both in pressure and quantity, on account of the well being shut in?

A. We have had wells shut in,—for instance, during the summer period, and when they would be turned into the line, say in the fall, or whatever time they were turned in, found that they had drowned out during the interval during which they had been turned out of the line. Again, we have made tests and are aware of the fact
28 that even though the well is shut in, the rock pressure has decreased.

Q. Is there any way that has yet been discovered by the trade for accounting for these peculiarities and idiosyncracies of wells?

A. Some gas men are of the belief that a well is more apt to drown out when not putting gas into the line than when it is shut in. They explain the drop in rock pressure by the fact that while your well is shut in, wells belonging to other companies, or perhaps wells which you own yourself, or are feeding into the line, have taken the gas out of that gas-bearing strata, and in that manner reduced your rock pressure. It might be, too, that enough moisture has settled in the well during the interval that it was turned out of the line, and the well perhaps became partially drowned out, not totally drowned out.

Q. As a matter of fact, then, there is no accepted theory in the trade, is there, with reference to the situation which you have described?

A. No determined theory, I don't believe.

Q. After gas is brought to the surface, is there any way by which it can be stored, any practical way, before transmission to the points of consumption?

A. I am told that there are one or two companies who have a place in which they can turn the gas into holes that have been
29 drilled into the ground, and in that manner store the gas—putting the gas back into the sand, in a way. As I recollect, there is only one or two, perhaps three, of those localities. As far as the Manufacturers Light & Heat Company is concerned, or any company that I have been associated with, I know of no manner, no way that they have of storing their gas previous to it being marketed, other than permitting it to remain in the gas-bearing sands. A few companies who formerly sold artificial gas still retain their holders, which permits of a little storage. Other than the storage which their pipe line affords, they have no storage.

Q. Gas, then, when brought to the surface, must be marketed or lost?

A. It is either marketed or remains in your pipe line system or remains in your gas-bearing sand. If you don't remove the gas from the gas-bearing strata, and there are other companies drawing gas from that strata, they will secure the gas and you, of course, will not market it.

Q. When this gas is brought to the surface, to the mouth of the well, what is the system by which it is conveyed to market and delivered to the consumer?

A. At the present day? Practically all gas in our company, as it leaves the mouth of the well, enters what we call gathering lines, or branch lines, which connect the well with the lines leading to
30 the compressing stations. The gas is conveyed to them, up to the compressing station, and there enters the compressors at a lower pressure than it is discharged at. In other words, our compressing stations take the gas out of the low pressure, squeeze it or compress it so that it reaches a considerably higher pressure, and is then discharged into what is styled the main lines, main transporting lines. After leaving the compressor station and entering these lines, it travels up to where the branch line leaves and enters the community which is being served; and at various points in that town or city, regulators are set which reduces the pressure of the gas from the pressure in the main line to what we call an intermediate pressure. I mean by that, on our lines we have pressures on the main line varying from 300 pounds down. When we reach the community that is to be served, that pressure is cut by the use of regulators down to, say, 50 pounds, and then on that line another regulator is set, which further reduces the pressure of the gas to the pressure at which you deliver it to the consumer. On our systems, the pressure at which we deliver gas to the consumer is approximately 8 ounces. After the gas has passed through this last regulator, it enters various distributing lines, laid in the streets or alleys in that community, and from those lines a branch line is run to the house, the
31 building in which you are going to sell your gas; it is styled a service line. A curb-box is set on this service line, at a point where the curb would be, generally alongside of the sidewalk. From there the gas is conducted into the house, and at some point near the entrance to the house, an apparatus for metering the gas is connected. From that meter it passes into the lines of the consumer, the house lines of the consumer.

Q. The system then consists of gathering lines, the main transportation system, the compressor stations, the further transportation lines, and then the distributing system in the various communities where the gas is sold?

A. And the various appliances for regulating pressures.

Q. And the various appliances for regulating pressures intermediate to those respective points?

A. Yes, sir.

Q. Will you explain what you mean by a compressor station, or compressors, and their use?

A. In the early days our rock pressures—the pressure, of course, which drives the gas up and out of the mouth of the well—was very high, and we were enabled to transport that gas to market without any other force. As our consumers used the gas and this rock pressure declined, it became necessary, in order to supply your consumers with gas, to install these compressing stations. Ours are

of various sizes, various horse powers. We have five rather
32 large stations on our lines. It takes the gas from the gathering lines coming from the well, and in a cylinder the gas is compressed to a smaller space, and as the gas is compressed of course the pressure increases. It is then released out into your discharge lines at a pressure equal to what it was compressed at. That is the purpose of compressor stations. Without compressor stations, we perhaps would be unable to supply many of the consumers which we now supply.

Q. And to what pressure do these stations compress the gas?

A. At various pressures, depending entirely on the amount of gas which your wells are capable of producing, and depending, of course, on the rock pressures that are in your line. In some districts, we take our gas at a zero pressure. Sometimes at Waynesburg, a pound or a pound and a half intake pressure, and a discharge pressure as high as 130 pounds. In our Sedalia field in West Virginia we take the gas as low as 12 and 13 pounds, and as high sometimes as 150, intake pressure. When we are taking gas from the Hope line at Hundred, the lowest pressure would run along 30 pounds, intake pressure. At Majorsville, at the present time, our suction pressure or intake pressure is about 40 pounds. The discharge pressure reaches sometimes as high as 300 pounds. Of course, there are other times when it is much lower.

33 Q. This gas is used by consumers for what purposes?

A. This gas is used by domestic consumers for the purpose of cooking, lighting, hot water heating and the heating of the home. It is used by industrial consumers for various uses,—we have steel plants, glass factories, potteries, machine shops, foundries—various industries who receive gas from our lines.

Q. What is the longest distance on your lines from which gas is transmitted?

A. From the most southern point to the most northern point is approximately 167.8 miles.

Q. Now, just give us those points.

A. I can't do it. I can show you these points—(referring to map).

Q. Never mind, just state about where it is, the southern point.

A. Well, say, from our most southern point, in the Hundred field, to our most northern point, in Mercer County, Pennsylvania.

Q. Where is the Hundred field?

A. In West Virginia, in Monongalia County. I want to change that answer,—The most southern point would be Sedalia Station.

Q. In what county?

A. Doddridge County.

Q. What would be the most northern point?

A. The most northern point is up in Mercer County, Ve-
34 nango County, Pennsylvania.

Q. In Mercer County or Venango County, Pennsylvania?

A. Yes, sir.

Q. Does the Manufacturers Light & Heat Company receive this gas which is delivered to it or which it produces in West Virginia, into its own transmission or main lines?

A. The gas it purchases?
Q. Either purchased or produced?
A. Yes, sir.
Q. And does it transport that gas itself through West Virginia and into Pennsylvania?
A. Yes, sir.
Q. Through its own lines?
A. Yes, sir.
Q. Owned by it?
A. Yes, sir.
Q. And does the Manufacturers Light & Heat Company deliver to the consumer at the various points of consumption, the gas thus received and transported?
A. Yes, sir.
Q. Through its own lines and distributing systems?
A. Yes, sir.
Q. And it owns those lines and distributing systems itself?
A. Yes, sir.
Q. It is the same corporation, is it?
35 A. The same corporation produces gas in the three States in which it operates, buys gas in the three States in which it operates, transports and sells gas in the three States in which it operates.
Q. Without the intervention of any other company?
A. Yes, sir.

Here the hearing was adjourned until Wednesday, May 12th, 1920, at 10:00 o'clock A. M.

36 Wednesday Session.

(May 12, 1920.)

And now, Wednesday, May 12, 1920, the hour of 10 o'clock, A. M. having arrived, parties met pursuant to adjournment, at the offices of The People's Natural Gas Company, Pittsburgh, Pa.

HARRY A. QUAY resumes the stand.

Direct examination continued.

Mr. Weil:

Q. You stated, Mr. Quay, that the same corporation, the Manufacturers Light & Heat Company, produces gas in the three states in which it operates, buys gas in the three states in which it operates, and transports and sells gas in the three states in which it operates. State whether or not it does this continuously, all the time?
A. It does.
Q. State what the facts are as to the movements and currents of gas in the lines from time to time, the directions in which it goes,

and to which states,—giving us somewhat in detail the practical facts with reference to the gas currents in the lines.

37 A. We purchase, and there is delivered to the Manufacturers Light and Heat Company by the Hope Natural Gas Company, at our compressing station, known as Sedalia Compressing Station, in Doddridge County, West Virginia, large sums of gas. We have gas from our own wells in the same district. Both these gases, together with other gas that is purchased, enters the compressing station. There are two large compressors in that station,—one is used exclusively for compressing gas purchased from the Hope Company, the other for the balance of the gas. In addition, at times, a portion of the gas coming from the Hope Company is admitted and mixed with the gas in the second engine. The gas is discharged from these two engine compressors and enters the same main line or distributing line leading to the various communities which we serve. The same situation exists at our Hundred station, located in Wetzel County, West Virginia. The same situation exists at our Porters Falls compressing station, located in Wetzel County, West Virginia, with this exception: that the gas purchased from the Hope Natural Gas Company, instead of mixing with our own gas at the station, enters the same gathering lines, which gathers our own gas some five or six miles away from the station. The gas compressed at the Sedalia station and at the Hundred station enters the

38 discharge lines at these stations at a point farther along north; They join and meet and enter into the main discharge line of the Manufacturers Heat and Light Company, at a point designated by us as Loudenville, or near Loudenville.

Q. What county?

A. That would be in Marshall County.

Q. West Virginia?

A. West Virginia. The gas leaving the Hundred station passes through the balance of Wetzel County, and enters and crosses over the Pennsylvania state line at the extreme southwestern part of Greene County, which is located in Pennsylvania; passes out of the state of Pennsylvania, and again enters the state of West Virginia, and meets with the line coming from the Sedalia Station at the point which I designated as Loudenville. The gas compressed at these two stations enters into our 16-inch main line, which passes in a northeasterly direction through Marshall County, West Virginia, and again crosses the state line dividing the states of West Virginia and Pennsylvania——

Q. Just a moment, Mr. Quay. Interrupting you here, I would prefer to take up the lines a little later, from the map, and follow them in their respective courses as you are doing now. You

39 misunderstood my question. I will repeat it in another form: The question I was asking was not with reference to the specific lines or the specific locations, because I expect to take that up on the map, and we can follow it more readily, but was with reference to the currents of gas in the lines, as to the direction, from one state to another, that they followed. What is the actual practical experience as to that?

A. The pipe lines of the Manufacturers Heat and Light Company are connected together. Any gas entering their lines is permitted to flow in any direction which it chooses, or actually does. Natural gas in our lines is never at rest. If there is a large demand for gas at one point, the gas in the lines naturally runs to that point. Perhaps it will be heavier loaded at another point, the gas flows to that point—Whatever point *point* there is a large demand. It crosses freely any point or any state line.

Q. Well, what are the facts as to the gas passing continuously or otherwise in any particular direction?

A. The gas passes from the state of West Virginia into the state of Pennsylvania, passes from the state of Pennsylvania back into West Virginia, passes from the state of West Virginia into Ohio, and passes from the state of Ohio back into West Virginia.

40 Q. And what about the currents of gas in the line, are they stable or not in any particular direction—do they change?

A. They are not. They are likely to change any hour of the day, or any day of the month, any month of the year.

Q. What has been your observation in that respect, from your operation of the lines?

A. That is actual conditions as I observed them from operating.

Q. I would like to have you explain what does that, changes a current of gas from one direction to another in the same pipe line—at different instances?

A. I would say that if there is a larger demand at one point than at another, and there is more gas taken out at that particular point than at another, the gas naturally goes to the point of lowest pressure.

Q. The gas, then, in the lines, if I understand you rightly, flows in one or another direction, according to the lowest pressure at any particular point?

A. That is correct.

Q. And does it change frequently—this current?

A. I would say yes.

Q. Give us the facts as to the production of gas and oil, and when the developments for gas became a separate indus-

41 try—what are the facts?

A. In the early days of the industry, drilling operations were carried on for the sole purpose of finding and discovering oil. In the drilling for oil, quantities of natural gas was encountered, and at that time it was considered a hindrance and an annoyance to the owners; it was also a source of considerable danger, inasmuch as the gas was liable to ignite, destroy their derrick, and cause accidents and delays in operation. Ordinarily the practice was to conduct this gas off to one side of the regular derrick and light it, permit it to burn. Of course, it was discovered that it had heating qualities, and that it had the quality of giving light. Men working on and about the lease began to conduct a portion of this gas off to their shanty or boiler house, and there used it for lighting, and some for heating; it gradually extended to homes in the vicinity, later on to little settlements, and so forth, and finally was piped to larger towns. My actual experience or first knowledge of natural

gas was at Oil City, Pennsylvania, I believe I was along seven or eight years old. They were burning gas in that city, and I remember distinctly my aunt showing my parents and myself this gas burning in her cookstove. It was a regular coal cookstove, the burner in it was a pipe which had holes drilled in it.

42 I recollect that she raised the kettle and showed my mother that there was no soot or dirt as usually occurred when cooking with coal and wood. Perhaps the fact was more impressed on my mind for the reason that my parents ran a hotel, and my mother quickly realized the value of natural gas for the purpose of cooking. We resided at Meadville, Pennsylvania, Crawford County, I would say, roughly, twenty-five to thirty miles from Oil City. My father was in council at that time, and I think perhaps two years after that, through efforts made by the citizens, we got natural gas. That was in the year 1886. When that gas was first piped into our home, I recollect that it was sold at so much per stove. My parents made a contract for gas for a period of five years, at the rate of 50 cents per month per stove. The general practice by consumers of natural gas at that time was to light these stoves, and during the winter perhaps never closed the valves or reduced the amount of gas which they consumed. If the room got too warm, the door or window was opened, and in that manner the temperature was regulated. There was apparently an abundance of natural gas. Many people thought it would last forever, and it was very wastefully used. It was discovered, however, in two or three years after that that the amount of gas was being depleted, and that there were shortages at some times. It was realized

43 by those in the industry that steps must be taken to secure additional gas supply and at the same time conserve and stop this great waste in the manner in which it was being burned. A large gas field at that time was in and around Oil City; they began to extend their fields and secure additional supplies; and I recollect that that was the beginning of the installation of meters. It was considered a critical time in the gas industry, there was a great deal of opposition on the consumer's part to the installation of these meters, practically every one being of the opinion that by the installing of a meter their gas bills would be greatly increased. Meters were installed, however. In those days, inventors, people connected with the industry and outside of the industry, devoted a great deal of attention to perfecting appliances, by which natural gas could be used and consumed with much smaller quantities of gas. Gas ranges were put into use, stoves especially constructed for the burning of gas—heating—were installed, and it was shown that those who secured these gas saving appliances, who watched and used their gas economically, burned it, if anything, cheaper than at the old rate. With reference to the Manufacturers Light

44 and Heat Company, their first operations were in and about Washington, the town of Washington, situated in Washington County, Pennsylvania. Later on, as their source of supply became more or less depleted, their field was extended into what was known as the Hickory Field, some distance—say ten or fifteen miles from Washington——

Q. Washington, Pennsylvania, you mean?

A. Washington, Pennsylvania. As that field was drawn upon and depleted, they developed a field—what is known as Buffalo Field—in Washington County.

Q. In Washington County?

A. Washington County, Pennsylvania. From that field they took up territory in Greene County and in West Virginia—a territory bounding on each side of the state line. The Wheeling Natural Gas Company, which the Manufacturers Company purchased, also entered into that territory.

Q. Into which territory?

A. Into the territory which I have mentioned.

Q. Greene County, you mean?

A. Greene County, and what is known as the Cameron District, West Virginia. Prior to that time, however, they were furnishing large quantities of gas to the City of Wheeling.

45 Q. Who was?

A. Manufacturers Company and the Wheeling Natural Gas Company. The records show, I am informed, sales as high as 35,000,000 cubic feet per day. It was delivered by my company, gas produced in Pennsylvania and sold in Wheeling, West Virginia, and in that immediate vicinity. Later on the company developed —or at about the same time they secured territory in what is known as the Hundred field. Later on——

Q. Just a moment. When you give the names of these fields, tell about where they are situated—Hundred Field where?

A. In West Virginia.

Q. In just what county?

A. Say in Wetzel County and Marion County, West Virginia. Later on, they made extensions and began operations in what is known as the Sedalia Field, in Wetzel and Tyler Counties and Doddridge County.

Q. Do you remember what year it was that the Manufacturers Company first went into West Virginia for its gas—any of its gas?

A. To the best of my recollection, it was along about 1888 or '89—I might be incorrect on that; it was before my time.

Q. Now, you gave us a bird's-eye view of the history of
46 the development of the natural gas business. Without going into details, state what the facts are as to the growth of the business from that time to the present time, as to its proportions?

A. Perhaps, starting with the year 1910, when I came with the company——

Q. I don't mean the Manufacturers Company alone, I mean generally, speaking now about the natural gas business generally?

A. You mean proportionately as to their gas available and the number of consumers?

Q. No, just whether or not natural gas is being used at the present time in sections of Pennsylvania, in a number of different populous sections of Pennsylvania. What are the facts as to that?

A. Oh, they supply communities that are located anywheres near on every line—large communities. In fact, up to within the

last few years, every effort has been made to extend the business, the number of consumers and the amount of gas sold.

Q. What are the facts as to populous districts and sections of Pennsylvania being dependent upon natural gas wholly for their fuel for domestic purposes?

A. An estimate that I have made——

Q. I don't care to have you go into details.

47 A. A large number; I would say millions of people in Pennsylvania depend upon natural gas for domestic purposes.

Q. Exclusively?

A. Practically so, yes, sir.

Q. Well, now, where natural gas is used as a fuel in dwelling houses and also in industrial plants, is it necessary to construct them specially for this purpose?

A. To burn gas economically, it is essential that they have regular gas-using appliances, built, constructed especially for the use of natural gas.

Q. And what are the facts as to the use of gas in industrial plants in the same particular?

A. When the price of natural gas was very cheap, it was used in a great many crude appliances, but as the price advanced, the industrial user has been forced to adopt appliances specially constructed for the use of natural gas, so that he might burn it economically.

Q. Where dwelling houses have been constructed with the burning of natural gas as a fuel in view, and with natural gas appliances installed therein, what are the facts as to whether or not, to introduce other fuel, it is necessary to reconstruct such houses?

A. I know of many that it would be necessary to reconstruct. I mean by that that some of the houses are built without flues

48 or chimneys. To burn coal or wood it would be necessary that flues be constructed and certain changes made in the homes.

Q. And in those houses which have been constructed with the intention of usig natural gas as fuel, where there are flues and chimneys, what are the facts as to the sizes of those flues and chimneys for other fuel?

A. I know of quite a few that the flue inside the chimney is restricted to such small size that coal cannot be burned successfully,—that is, the smoke comes out into the rooms. It would be necessary for them either to tear those down or reconstruct in some manner, and make a larger flue or drafts, for the burning of coal or other fuel.

Q. From your experience and knowledge of the business and observation in those towns or cities, in which natural gas was used as a fuel, and in which there have been large construction of houses during the last few years, especially five or ten years ago, were those houses built solely with reference to the burning of gas? Or were they planned and built with reference to the use of other fuel as well —What was the custom?

A. A great many of them were built for the sole purpose of burn-

ing gas. Now, that situation perhaps has changed in the last
49 two or three years. Previous to that time the supply of gas was very good, but for the last three or four years, our company, as well as other companies in this vicinity, has been unable at all times to supply the full requirements of their consumers, and shortages have occasionally occurred. This has brought attention to the fact that natural gas is not going to exist for ever and that they might be called upon at some time to substitute other fuel in the immediate future.

Q. And that is what has brought about then the change in the methods of construction to which you have referred?

A. Yes, sir.

Q. Now, can you give us about the time when you entered into the state of West Virginia—your company—for the purpose of procuring this gas supply? You have told us about its going in, but you did not give us the date.

A. I stated along — 1888 or '89, to the best of my recollection now, I don't know exactly.

Q. Well, give us your best recollection, about what date?

A. I couldn't say.

Q. I say, what was it—1888 or '89?

A. 1888 or '89, I think now.

Q. Well, that is near enough for our purpose.

A. I wouldn't want to say exactly.

50 Q. Well, now, from the time that it entered the state of West Virginia, give us the facts as to the production in West Virginia becoming, if it did become, the immediate source of your gas supply,—what are the facts as to that, and when did they occur?

A. The longer a gas field is in service, the less gas it still has remaining for the use of its customers. Things being equal, a new field should be longer lived and produce more gas than an older field. The territory which this company has, which I styled as the Cameron Field, West Virginia, is in my opinion, the most productive field which the company has.

Q. Well, now, beginning in 1888 and '89, as you have already stated, you had fields in Pennsylvania as well as West Virginia?

A. Yes.

Q. When, if it ever did, did West Virginia become the chief source of your gas supply? Has it ever become the chief source of your gas supply?

A. Since along about 1910.

Q. Since 1910?

A. Yes, sir.

Q. Then for about ten years?

A. West Virginia has been the chief source of supply for the Manufacturers' Heat and Light Company for about ten
51 years.

Q. You have given us the amount of gas taken out in 1919, and from that, of course, we can get the exact proportion?

A. Yes.

Q. Now, what are the facts, however, as to the depletion of your Pennsylvania and Ohio fields?

A. In what way?

Q. Yes, what are the facts as to their being depleted?

A. They are rapidly being depleted.

Q. What are the facts as to the declines in the production of gas from your Ohio and Pennsylvania fields, whether rapid or otherwise?

A. The decline in this field has been the ordinary decline up, I would say, to the last year or two, it has been rather rapid since that time, I would say fairly rapid for the last four years.

Q. Have you any other fields in Ohio and Pennsylvania that you are holding in reserve, or to which you can look for supplementing your gas supply,—of your company?

A. Other than the fields which this company owns, I know of no fields available; I have no knowledge of any.

Q. You mean by that, no knowledge of any fields, whether owned by your company or anybody else?

A. Or anybody else.

52 Q. What did the Manufacturers' Company do, without going into details, but just stating generally—what did it do as to its developments in West Virginia of gas and the transportation of the same? What does the company do?

A. In what way, Mr. Weil?

Q. Well, I want to show, for example, the action of the Manufacturers' Light and Heat Company in West Virginia. Now, I want to show generally what is necessary,—to one not initiated in the business, what it is necessary for a company to do, when it goes into any territory to get gas and transport it?

A. The general manager, or an official of a gas company, having decided that a certain locality might perhaps be productive of gas, sends one or more men from his leasing department to that vicinity, and secures a lease on the grounds that he desires to drill, or to hold in reserve. These men see the farmers, or the owners of the land, and a written instrument is entered into, which permits and allows the company to enter upon his land, the owner's land, and begin developments for the drilling of a well. These leases are generally made by the payment to the owner of a certain yearly rental until a well has been drilled and production secured. The average rental usually paid is one dollar per acre per year. There are many

53 variations, some less and some higher than that price. If oil is discovered, the royalty is generally one-eighth of the oil. If natural gas is secured, the owner is paid a certain sum of money for each well, as long as it is productive, and gas is taken from the farm and used for sale. Having secured the leases,—and it is the custom to secure sufficient leases, so that in the event a production is secured, your well is protected—a structure is built; or rather, previous to that time, the manager of the company makes a location at the point at which the well is to be drilled. An engineer is sent from the engineering department, and by careful measurements a well located and plotted. The location having been made a structure is built,—a very heavy structure known as the rig or derrick. A contract is entered into with the contractor for the purpose of drilling a well, or in some instances a well is drilled by machinery, the men working direct in the employ of the company. In building the rig, heavy timbers are first used, known as the sills, the

floor is constructed for the balance of the rig. The drilling outfit is moved in, which consists generally of a boiler, bits—various sized bits—jars, stem, cable. The drilling of a well is really the puncturing of the earth, the making of a hole. It is accomplished
54 by the weight of the tools rising and dropping, striking the stone, slate or sand, or whatever substance is encounters on its way down into the earth. It might be said, I presume, that a bit—average bit—jars, stem, perhaps weigh two tons. It is the weight of the metal rising and dropping, which forces its way down into the earth. The wells are not productive——

Q. Well, now, just a moment, so as to save time. After the well is completed,—You have described how you take up the territory and drill the well, and then sometimes other wells; what do you do then as to the laying of lines, if anything?

A. A man is sent from your right of way department——

Q. Well, never mind the details. Just what do you do as to laying gathering lines?

A. Gathering lines are laid to convey the gas into your main line from the well.

Q. And are main transportation lines laid?

A. Yes, sir.

Q. Now, then, to recapitulate, because I want to get at another subject: After taking up your territory, drilling your wells, and laying your gathering lines and your main transportation lines for the transportation of the gas, that constitutes in the main the activities of the gas company in entering any state or territory or field for the purpose of obtaining gas?

55 A. Yes, sir.

Q. After those respective operations—or rather, in those operations all together which you have described, including the taking of territory and making of leases, the cost of obtaining the same, the drilling of wells, the cost thereof, the laying of the different lines, the building of compressor stations, which you described yesterday, and all other operations and activities of a company, how much has the Manufacturers Light and Heat Company invested in the State of West Virginia, in obtaining and transporting gas for its system, since it entered the State of West Virginia up to the present time?

A. I would say that a fair estimate as to the money that they have spent in this work and the expense would approximate close to $30,000,000, if not over that.

Q. Can you tell us what its present investment in the State of West Virginia is, as carried in your capital account—approximately?

A. Roughly, I would say approximately $6,000,000, property value.

Q. At the present time?

A. Yes.

Q. Does that include the wells, leases and the lines?

A. That is the physical property reported for the pur-
56 pose of taxation the value set upon our property by the State for taxing purposes.

Q. You mean the State——

A. The State of West Virginia; I believe $10,000,000.

Q. That is, at the present time?

A. Yes, 1919, or 1918.

Q. After you made the contract, or did the making of the contract which you have described with the Hope Natural Gas Company, did that obviate or not the necessity of making still larger investments in the State of West Virginia on the part of the Manufacturers Company?

A. I consider it did, yes, sir.

Q. Other companies engaged in the natural gas business, or all companies engaged in the natural gas business, following the same method of procedure as you have described for the Manufacturers Light and Heat Company, have made large investments in the State of West Virginia in obtaining and acquiring lands, drilling wells, laying pipe lines, paying rentals and royalties, installing pumping and compressor stations, and other necessary incidents to the natural gas business. Now, can you give us in round numbers approximately, or your estimate, of the amount that has been so invested, by all of the companies?

57 A. I would be unable to answer that, only in this way: That I am familiar in a general way with the Hope Company as it was prior to, say, ten years ago, and the Reserve Natural Gas Company. I am acquainted in a general way with the territory owned by these companies, in so far as it adjoins or is in close proximity to ours, and also of the Philadelphia Company. I can only say that it must be millions, tens of millions—tens of millions of dollars—basing it on our own expenditures.

Q. You have no means or method then of making any estimate?

A. No, I have not.

Q. Do you know for what purpose these investments were made, with reference to the use of the gas,—as to where it was to be transported and sold,—as to the Manufacturers Light and Heat, and as to all of these companies?

A. Speaking for the Manufacturers Light and Heat Company, this money was expended, and the developments made, for the purpose of supplying all of its customers as much gas as it could possibly secure for their use.

Q. And what as to the other companies, if you know?

A. Those that I am familiar with, it was the same condition.

58 Q. Do you refer, when you say those that you are familiar with, to the companies that you named a moment ago?

A. Yes, and from acquaintance with the officials of other companies.

Q. What other companies generally?

A. The Philadelphia Company, the Ohio Fuel Supply, the United Natural Gas Company,—those.

Q. Do you know anything about the Carnegie Natural Gas Company?

A. I am well acquainted with their management, and at Waynesburg, and in our Cameron field, where they have territory, I am somewhat familiar with them.

Q. What would be the fact as to destroying the market for their

gas, if you would restrict the transportation of these respective companies?

A. If their supply was restricted and transportation, of course it would mean that there would be less gas for customers or patrons beyond the point at which it was restricted.

Q. And what would be the effect on the market value of the property of the investors?

A. I would say that the market value of the property, without gas to serve the patrons, would be very little.

Q. Are you familiar in a general way with not only your own towns, that you supply with gas, but the towns in Pennsyl-
59 vania that are being supplied by other companies?

A. I am, for the reason that I have worked and inspected in a great many of them.

Q. Taking the list attached to the bill of complaint of The Commonwealth of Pennsylvania against The State of West Virginia, being Original No. 23, in the Supreme Court—Do you have a copy of it there?

A. Yes, sir.

Q. Now on page 6 of that bill of complaint, first look over that list, then I want you to tell us if you know how many of those towns are being supplied with natural gas, in the State of Pennsylvania?

A. I would say that — are over a hundred of the towns listed there which my company supplies gas to. There are five or six, perhaps more than that, that we serve part of those communities. And there are a great many of these towns that I see mentioned, in which I have inspected and know that they consume gas.

Q. In order to avoid going over the list, will you just look over the list yourself—and we will wait while you look it over—and see if there is any portion of that that you are not familiar with, and couldn't say as to being supplied with gas by one or other of the natural gas companies?

A. I think I could safely say that practically every town
60 that is printed or designated in which a population is shown, with perhaps one or two exceptions, I know has been served with gas. That is, either directly or indirectly,—that is, by my own actual knowledge or by information. Now, when it comes to these smaller places, there are quite a few of them that I know nothing about.

Q. That is, on pages 8 and 9?

A. Pages 8 and 9. There are approximately 55 or 60 of those places designated on pages 8 and 9 that we supply, and I know that they are getting gas. Quite a few of the other names or localities designated, I know, but I don't know all of them on there, I wouldn't be able to tell.

Q. Well, could you give us an estimate then? Would you say that you know over half, or over two-thirds, or three-fourths, or what would you say?

A. Of the total?

Q. No, of those on pages 8 and 9.

A. I would say I know half of them anyway, fifty per cent or more.

Q. All of those in Allegheny County you would know about, wouldn't you?

A. No, I wouldn't want to say that I would, because there are some smaller companies in Pennsylvania that supply gas
61 that I might not be aware of—or in Allegheny County rather. I can give you the names of those that this company supplies.

Q. Well, suppose you do that, so as to be a little more specific—Give us the names of the towns supplied by the Manufacturers Light and Heat Company.

A. Part of the City of Pittsburgh, New Castle, Washington, McKees Rocks, Beaver Falls, a small part of Carnegie, Rochester, Knoxville, St. Clair Borough, Coraopolis, Ambridge, a small part of Crafton, Sewickley, Avalon, Mt. Oliver, Ellwood City, Canonsburg, New Brighton, Bellevue, Carrick, McDonald, Mt. Lebanon, part of Bridgeville, Bentleyville, Leetsdale, part of Heidelberg, Ben Avon, Aliquippa, Waynesburg—part of Waynesburg—Beaver, part of Monaca, part of Clairton, Freedom, part of Westview, Conway, Emsworth, Oakdale, Edgeworth, Hazeldell, Greentree, Dormont, Banksville, Ben Avon Heights, part of Blair, Bruceton, Castle Shannon, Coraopolis Heights, East Bellevue, Ewing Station, Fairhaven, Fair Oaks, Federal Forest Grove, Glenville, Glen Osborne, Groveton, Haysville, Library, Neville Island, Noblestown, Oak Station, Option, Rennerdale, Sewickley Heights, Stoops Ferry, Sturgeon, Westwood, part of Woodville, Clinton, Cochran Mills, East Rochester, Economy,
62 Fallston, Glasgow, Georgetown, Koppel, Smith's Ferry, West Bridgewater, Woodlawn, part of Dunn Station, Ridgeville, South New Castle, Amity, Beallsville, Dover and Bulger, Hickory, Lawrence, Marianna, Midway, Scenery Hill, West Middletown. That completes the list.

Q. All of those places that you have named then are being supplied, in whole or in part, by the Manufacturers Light and Heat Company at the present time?

A. Yes, sir.

Q. And have been for some considerable time?

A. Yes, sir. There are one or two communities, smaller ones, that we went into—oh, three or four years ago—with that exception.

Q. All of these towns which you have named are in Pennsylvania?

A. In Pennsylvania, yes, sir.

Q. Do you have any list with you so that you can give us the names of the towns that you supply in the state of Ohio, your company?

A. I can give you the larger communities perhaps, pretty nearly all but the real smaller communities. In Ohio we furnish gas to the City of East Liverpool, Wellsville, Toronto, Steubenville, Mingo Junction, Rayland, Newarkville(?), Tiltonsville, Martins
63 Ferry, Bridgeport, Bellaire, Shadyside, Clarington, three or four smaller—three smaller communities, one of them is called Texas, opposite New Martinsville, West Virginia, one is Sardis, and I forget the name of the other community. Now, there are perhaps ten or fifteen smaller communities in the state.

Q. In the state of Ohio?

A. Yes, like Wintersville, smaller communities of that kind.

Q. Have you any means of estimating the population in Pennsylvania that is using natural gas for fuel and light—not only from your own company but from all the natural gas companies supplying——

A. Some companies' officials compute that for each meter which they have connected there are four persons in that community—that is, if you have 1,000 meters, it would represent a population of 4,000 people. There are others who do not agree with that. They claim there would be about five persons for each meter which you have connected.

Q. Well, what is the total number of meters, if you know, of all the companies in Pennsylvania supplying natural gas?

A. I would be unable to state the number of meters in Pennsylvania.

Q. Well, can you give us approximately, or can you give
64 us an estimate made by yourself of the total population in Pennsylvania which is using natural gas? Or have you made no such computation, from your knowledge of the business?

A. I have made no estimate at all. I am getting the information. For instance, the number of meters which the Peoples Company have, the number which the Equitable Gas Company have and ourselves, we would arrive at the fact that it is over a million, at least.

Q. That is, from those companies?

A. From those companies.

Q. Do you know from your own information what companies, of the real large companies, obtain their supplies of gas substantially wholly from the State of West Virginia, for domestic consumers?

A. I know that the East Ohio Gas Company, supplying gas in Ohio, and the Peoples Natural Gas Company, Pennsylvania, the Fayette Natural Gas Company and the Manufacturers Light and Heat Company practically receive their gas for domestic purposes outside the state.

Q. And what about the Carnegie Natural Gas Company?

A. I don't know. It is my impression that the Carnegie Natural Gas Company has their own production. Of course, they might buy some.

65 Q. I mean, either produce or buy? It doesn't make any difference.

A. I know that they have production in the State of West Virginia.

Q. And what about the Philadelphia Company?

A. They have production outside the state.

Q. In what state?

A. State of West Virginia.

Q. And the Ohio Fuel Company?

A. I am not able to say whether they have production in West Virginia or not—that is, gas production.

Q. Are there any industrial plants or domestic consumers in

Pennsylvania that are wholly dependent for fuel upon the natural gas transported from West Virginia into Pennsylvania?

A. I would say that none that I know of are wholly dependent—Well, I will have to change that answer. I know of a few who at the present time are wholly dependent upon natural gas for fuel. The condition in the industrial——

Q. I am speaking now of both industrial and domestic consumers.

A. Yes, sir.

Q. My question was as to both.

A. Yes, sir, they are dependent entirely on natural gas.

66 Q. Now, distinguish, as you were going to do, as to the industrial consumers.

A. With a few exceptions, all of the industrial consumers on our lines have so equipped themselves with substitute fuel that in times of emergency the supply can be practically discontinued. However, some of them where gas is very essential and the amounts very small, and used for particular purposes, it has been rather hard for them to substitute. The domestic consumers, there are thousands of them, who have no other way, at the present time, at least, of heating their homes or cooking, other than with natural gas.

Q. Are there any known gas fields outside of those now occupied and in use, within any reasonable distance from the territory supplied by your company and other companies in this district, that are available, from which to obtain a gas supply?

A. None that I know of.

Q. What are the facts as to those fields being at the present time adequate or not?

A. The companies that I am acquainted with, I would say that the present fields are not adequate to supply their consumers with all the gas they need at all times—not nearly adequate. Neither is the field capable of supplying anywhere near the amount of

67 gas which could be sold if you had it for sale—that is, customers, speaking of those on the lines of the Manufacturers' Light and Heat Company, I could sell millions of feet of gas more a day to industrial concerns, could even extend lines to supply and put on additional domestic consumers, if we had the gas available for sale.

Q. At the present time, are the known gas fields occupied and in use?

A. You mean, in this——

Q. I mean, tributary to this section.

A. So far as I know of, yes, sir.

Q. Mr. Quay, calling your attention to the map which is here, and which for purposes of identification, I will have marked by the stenographer as Pennsylvania Exhibit No. 1, can you have made from that map blueprints reduced in size?

A. Yes, sir.

Q. And will you have those made subsequently, so that they may be used by counsel and parties in these cases?

A. Yes, sir.

(Large map showing gas districts of Pennsylvania, Ohio and West Virginia marked as Pennsylvania Exhibit No. 1 of this date.)

68 Q. Does this map show the location of the lines of the Manufacturers' Light and Heat Company in Pennsylvania, Ohio and West Virginia?

A. It shows the main lines; it does not attempt to show all the lines of the Manufacturers Company—distributing lines, and so forth.

Q. This map shows the main transportation lines?

A. Yes, sir.

Q. It does not show the gathering lines?

A. It shows a few, not all, of the gathering lines. It is intended to show the districts from which natural gas is secured, gathering lines, and the lines which transport the gas to the communities which are served. There are some of the smaller communities that lines supply that are not shown. These are the main lines.

Q. It does not show then all of your gathering lines, nor does it show any of your distributing systems in the respective towns or cities?

A. It does not.

Q. Now, Mr. Quay, will you just point out to us on this map, Pennsylvania Exhibit No. 1, the lines of the Manufacturers Heat and Light Company, beginning at the southernmost point in West Virginia, taking up one main line after the other, showing the various large points of consumption on that line, and the respec-

69 tive places where it crosses and recrosses the state lines between the different states, whether Ohio and West Virginia, or Pennsylvania and Ohio, or Pennsylvania and West Virginia. Take the different main lines separately, and give us the size of the main line.

A. The most southern point on the lines of the Manufacturers Light and Heat Company is located in Milton Township, Doddridge County, West Virginia. It is at a point where the company purchases gas from A. F. Randolph, well No. 2024. It is a six-inch line, designated by us as a gathering line. This line passes and joins with another six-inch line coming from a northerly direction, the two lines joining, then running in an easterly direction in Doddridge County. The size of the same is then increased to a ten-inch line.

Q. Now, what is the point at which they join?

A. You mean these two six-inch lines?

Q. No—Well, never mind that.

A. This line then goes in a northerly direction, with various branch lines which collect gas from wells in that vicinity, into our compressing station known as the Sedalia compressing station, in Doddridge County. There is also another six-inch line, gathering line, in the extreme southeastern portion of Wetzel County,

70 West Virginia, which runs in a southerly direction, which size of line is increased to ten-inch, and also enters the Se-

dalia compressing station, having branch lines, the same carrying gas from wells in that vicinity. There is also a connection at this point by which the Hope Natural Gas Company conveys gas to this compressing station, and is gas which we purchase from them under contract. Gas purchased from the Hope and other parties, and that which we produce ourselves, leaves the Sedalia compressing station, and enters the 16-inch discharge line. The line is laid and runs in a northwesterly direction from the station, leaves Doddridge County and enters Tyler County, then assumes a more northerly direction, and crosses the entire county of Wetzel, and enters into Marshall County, West Virginia, then assumes sort of a northeasterly direction, and again turns towards the north, crosses the southeastern portion or corner of Marshall County, and leaves the State of West Virginia and enters the State of Pennsylvania. This line becomes a 20-inch line in size at or near this point——

Q. Don't say "this point." At or near what point?

A. At or near the state line dividing the states of West Virginia or Pennsylvania.

Q. At or near Majorsville, is it?

A. No, it is three miles from there, I would say—well,
71 two miles.

Q. Two or three miles from the Majorsville compressing station; is that right?

A. Yes. It continues in a northeasterly direction, through Washington County——

Q. Well, now, just a moment. Just give us now its general extension, without going into details. It goes through Washington County and what other counties?

A. Into Allegheny County, from Allegheny County, and through connection with other lines, into Beaver County, Butler County, and on into Lawrence County, Pennsylvania.

Q. Now, then, in that line, flowing into that line and connected therewith, are numerous other smaller lines connected with the wells of the company, are there not?

A. Yes, sir.

Q. For example, you did not mention the line from Hundred station—isn't it?

A. Yes, compressing station.

Q. From the Hundred compressing station?

A. No, sir.

Q. Now, what is the size of that line, and where does it begin?

A. The line entering the Hundred compressing station—there are four or five lines.

Q. The main line.

72 A. The main or largest line is a 12-inch, and has its starting point in Marion County, West Virginia.

Q. And the other lines on the western side?

A. The Western side, the starting point, is in Wetzel County, West Virginia.

Q. What is the size of that line?

A. Six-inch line.

Q. And then what?
A. Then increases to ten inches in size?
Q. Then what?
A. Then to twelve.
Q. And enters the compressing station at Hundred?
A. Yes, sir.
Q. And there are still other lines that run into that station?
A. Four or five or six other lines entering the same station.
Q. And all of those are shown on the map?
A. All of the larger ones; there might be some smaller ones not shown.
Q. Now, then, running from Hundred station, that was a what sized line where it entered the 16-inch line which you described a few moments ago?
A. It was 12 inches in size.
Q. Up to the point where it entered the other line?
73 A. I think there is a portion of 16-inch line just before you reach the junction point.
Q. Now, that line extends from the Hundred station, as shown on this map, across from Monongalia County, across the corner of the State of Pennsylvania?
A. No, the discharge line from the Hundred station is in Wetzel County; it runs in a northwesterly direction from the Hundred compressing station, crosses the dividing line between the States of Pennsylvania and West Virginia, and leaves the State of Pennsylvania and crosses into West Virginia again, in Marshall County, West Virginia.
Q. And then finally connects with your main transportation line?
A. And connects with the 16-inch line which comes from the Sedalia compressing station.
Q. Without going into the details, these other lines, as shown upon this map, Pennsylvania Exhibit No. 1,—Do those correctly represent, as shown upon the map, the respective lines of your company?
A. They do.
Q. And where they are shown upon the map as crossing and recrossing the state line between Pennsylvania and West Virginia, does that correctly represent the fact?
A. It does.
74 Q. And all of these lines on the whole map have certain figures upon them, the different lines,—Do those figures indicate the size of the line, that is, the number of inches of the diameter of the line?
A. The figure with the mark indicative of inches, which you find paralleling these lines, represents the size of the lines.
Q. That is, the diameter of the line?
A. The diameter of the line; yes, sir.
Q. Now, taking the line, briefly, without going into detail, running up from the Porter's Falls pumping station, in Wetzel County, and running up to the western edge of Marshall County, does that cross the line of the state from West Virginia into Ohio, back again into West Virginia?
A. The gas leaving the Porter's Falls compressing station passes north through Wetzel County into Marshall County, continues

through Marshall County into Ohio County. In Marshall County, there is a connection or branch line by which gas may be sent to Moundsville. Continuing north to Glendale, on the Ohio River, in Marshall County; and at that point there is a 10-inch river crossing, passing from the State of West Virginia across the Ohio River, and into Belmont County, in Ohio. That line on the Ohio side
75 of the river continues in a northerly direction—that is in the State of Ohio—until in the town of Bellaire,—Well, there is another connection attached to the same, it crosses the Ohio River and connects the line in Bellaire, Ohio, with a line passing and coming up through Benwood, West Virginia. It continues north again on both sides of the river, on the West Virginia side and on the Ohio side, and at a point a little south of Bridgeport, there is another 10-inch line crossing the Ohio River, and connects the line in Ohio with the line in West Virginia.

Q. Are there any wells at that point? I see something on the map here. Does that indicate any production in West Virginia at that point?

A. Not at that point. North of Wheeling and Warwood, I believe we are purchasing small quantities of gas. Now, this line passes north through Marshall County into Ohio County; from Ohio County——

Q. Just a moment, before we get up there. Here is a point again at Yorkville, Ohio. What is that?

A. The line which we have been talking about. Paralleling the Ohio River in West Virginia, it continues north to a point opposite the place designated as Yorkville, and crosses the Ohio River, supplying the consumers at Yorkville, Grover and Rayland. We
76 have purchased this point——

Q. Not "this point."

A. From a well located a little distance north of Rayland, and are making connections.

Q. That is, in Ohio?

A. Yes; and are making connections from that well in Ohio with this line I have described as coming from West Virginia.

Q. Now, then, pursuing this line up to Ohio County.

A. This line coming from the Porter's Falls compressing station leaves Ohio County and enters Brooke County, at the point in the City of Wellsburg, West Virginia; there is a connection and a pipe line crossing the river, connecting with a six-inch line, which supplies consumers located in the town of Brilliant, Ohio. The line from Porter's Falls continues north through Brooke County, and at a point opposite Mingo Junction, Ohio, there is another—or, in fact, two six-inch river lines, which connect the main line from Porter's Falls station with an eight-inch line in Ohio; continues north to a point opposite Steubenville, Ohio, and what is known as East Steubenville, I believe, in West Virginia, where there are four eight-inch lines crossing the Ohio River, and connecting the lines, the main line in West Virginia with eight-inch lines in the State of
77 Ohio, and it supplies also the domestic consumers in the City of Steubenville; continues north in West Virginia, supplying

Holliday's Cove, down to Weirton, and at a point just prior—or rather at a point which would be about, perhaps, a mile west of Holliday's Cove, and south of Holliday's Cove there is a six-inch branch line leaving this main line, and crossing the Ohio River, entering the State of Ohio, and paralleling the Ohio River in Ohio, supplying the town of Toronto, Ohio, with gas. The eight-inch line continues on up, becomes a six-inch line, and enters Hancock County. South of King's Creek, in Hancock County, Ohio, this main line leading from Porter's Falls compressing station, passes out of the State of West Virginia, crosses the Ohio River, and enters the State of Ohio, paralleling the Ohio River in the State of Ohio, and in a northerly direction passes Jefferson County, into Columbiana County, Ohio.

Q. Just a moment. Going back now to the line above Toronto, what is the line that I see indicated upon the map here, with gathering lines, and so forth, in Jefferson County, Ohio, and west of Toronto?

A. At a point opposite New Cumberland, there is a four-inch branch line connecting two lines paralleling the Ohio River
78 in the State of Ohio, and just after this main line has left the State of West Virginia and entered Ohio, which is used as a gathering line and carries gas both purchased and produced by our company, back into the main line which parallels the Ohio River, and also supplies the consumers in the little town of Richmond, and along the line.

Q. Where is that gas produced, in what state and what county?

A. Produced in Jefferson County, Ohio.

Q. Do you know how many wells you have there?

A. I think there are three remaining.

Q. And there are how many different producers from whom you buy gas in that section?

A. At the present time, I believe the two wells are not producing any gas, being drowned out—the quantities have been small.

Q. All right, go ahead with the line.

A. This line passes in a northerly direction, as I have stated, leaving Jefferson County, and enters Columbiana County, Ohio, the size of the line increasing from six-inch to 7⅜, and then to a ten-inch line, and enters the City of East Liverpool, Ohio, where we supply a large number of consumers, both domestic and industrial.

Q. Well, now, just about East Liverpool, Ohio, on the
79 north, and also on the west, are indicated upon this map certain small lines. Are those lines connected with producing wells?

A. A branch line shows, connecting the 8-inch main line between the City of Wellsville and the City of East Liverpool,—a line carrying gas which we purchased. The line which you see directly north of the City of East Liverpool is gas coming from our own production, and also conveys gas which we purchased.

Q. Your own production and gas purchased in Columbiana County?

A. Columbiana County, Ohio.

A recess was here taken until 1:30 o'clock P. M.

80 Wednesday Afternoon.

(May 12th, 1920.)

And now, the hour of 1:30 o'clock P. M. having arrived, hearing resumed pursuant to adjournment.

HARRY A. QUAY resumes stand.

Direct examination (continued).

Mr. Weil:

Q. We stopped up here, Mr. Quay, near Chester, on the map this morning. Now, just describe the lines that come in there at Chester.

A. Chester is a town in West Virginia, directly opposite from the city of East Liverpool, Ohio. There are four gas lines crossing the Ohio River——

Q. Of what size?

A. I think there are three of them 10-inch and one 8-inch.

Q. There is one 12-inch there, isn't there?

A. That is across the river, Mr. Weil. Three 10-inch and one 8-inch, crossing the Ohio River and connecting the lines on the West Virginia side with the lines supplying the consumers in East Liverpool. About two miles——

Q. Just a moment. North of East Liverpool is a line indicated on the map——

A. You asked me about that this morning.

Q. All right, go ahead.

81 A. West of Chester and East Liverpool, about—approximately two miles, is another river crossing gas line, which connects with an 8-inch line on the West Virginia side of the river in Hancock County, and connects with an 8-inch and 10-inch line in Columbiana County, Ohio. There is a 6-inch line connected to the 8-inch line mentioned on the West Virginia side of the river, in Hancock County, which runs in a sort of an easterly, or notheasterly, direction, and crosses out of Hancock County, crosses the State line dividing the States of West Virginia and Pennsylvania, and continues on into Beaver County, Pennsylvania, and supplies consumers in the town known as Smiths Ferry.

Q. Now, coming back to these four lines which you say cross from Chester to East Liverpool, those lines also extend from,—what is this point (indicating)?

A. Frankfort.

Q. From a point known as Frankfort, Beaver County, Pennsylvania——

The Commissioner. That is below Beaver County, Mr. Weil; that is Washington County, I think.

Mr. Weil:

Q. (con.) —In Washington County. Where does that line cross the line between West Virginia and Pennsylvania?

A. The three lines, gas lines, beginning or connecting with
82 these four river lines mentioned, connecting Chester and East Liverpool, leave Hancock County, West Virginia, and cross the State line dividing West Virginia and Pennsylvania near a town called Tyrkeyville—or Turkeyfoot, I think it is called, a little town in Hancock County, West Virginia, crosses over into Hanover Township, Beaver County, Pennsylvania.

Q. What is the size of those lines?

A. 8-, 10- and 12-inch, in size.

Q. Now, coming down to the lines of the company at or near Majorsville compressing station, how many lines cross there, from Ohio into Pennsylvania?

A. The lines going into Majorsville?

Q. No, it doesn't make any difference whether they go into Majorsville or not. How many lines cross back and forth between the two States at or near Majorsville?

A. There are six or seven lines which cross the State line between the States of Pennsylvania and West Virginia in the district mentioned as Majorsville, Cameron District.

Q. I observe on the map a number of small lines, which I assume are gathering lines. Are those lines taking any gas from gas wells below, south of Majorsville?

A. The lines south of the Majorsville compressing station, and in that vicinity, are gathering lines, conveying gas from the
83 gas wells to the compressing station.

Q. And those wells are located on both sides of the line, both in Marshall County, West Virginia, and in Greene County, Pennsylvania, and Washington County, Pennsylvania, are they not?

A. The wells connected to those gathering lines, a portion of them are situated in Marshall County, West Virginia, a portion in Greene County, Pennsylvania, and a portion in Washington County, Pennsylvania.

Q. Without following these lines throughout, as indicated upon this map, Pennsylvania Exhibit No. 1, do those lines, as laid down on the map, show substantially the name, the gathering lines—or some of the gathering lines—the compressing stations, reducing stations, size of the lines, and the crossings from one State to another?—Are those substantially correct?

A. Yes, sir.

Q. And what is this map. Is it the office map of the Manufacturers' Heat & Light Company?

A. It is the official map of the Manufacturers' Light & Heat Company.

Q. Without taking up each of these lines separately, in order to save time, can you tell us at how many points they cross and re-cross the respective State lines between West Virginia and Ohio, and West

Virginia and Pennsylvania? How many such crossings are there?

84 A. I believe that there are forty-three different points at which our lines cross from West Virginia into Ohio, from West Virginia into Pennsylvania, and vice versa.

Q. And how many lines altogether are there thus crossing, there being a number of lines at individual points?

A. In naming the forty-three, there are forty-three lines.

Q. Forty-three lines?

A. Forty-three lines.

Q. You mean by that, there are, then, forty-three lines that cross back and forth, as you have described?

A. Yes, sir, at least forty-three.

Q. And at some of these points there are, as you have already pointed out, several lines that cross at the same point?

A. Yes, sir. I want to verify that statement a little: In the Majorsville field we are so close to the line, our large operation along the line, that there might be some smaller lines that I have not counted; I have taken the larger lines.

Q. Can you tell, for example, using the Majorsville field as an illustration, the gas that comes into those lines and goes into the different States? Can you tell from which State that gas comes, or into which State it goes?

A. I couldn't answer that.

Q. Is there any way of determining that, as you now oper-

85 ate your system?

A. I wouldn't know of any way.

Mr. Weil: I now offer in evidence the map identified as Pennsylvania Exhibit No. 1, with the right—if counsel will so agree—to substitute therefor, for the use of counsel on both sides, blueprints to be made from this map but in a reduced size; reserving, of course, to counsel for the defendant the right to make such comparisons as they may desire to make from time to time between the blueprint and the original map. Is that satisfactory to counsel for the defendant?

Mr. Blue: The State of West Virginia by counsel agrees to the introduction of the map, and the arrangement as stated by Mr. Weil will be satisfactory.

Mr. Weil:

Q. Mr. Quay, was it the companies engaged in supplying gas in Pennsylvania and Ohio, or companies engaged in supplying gas in West Virginia exclusively, that first developed the gas fields and gas territory of West Virginia?

A. My belief is that it was companies that originally began operations outside of the State of West Virginia.

Q. And about how long was it after these gas fields were developed before local companies were organized in West Virginia for

86 the purpose of supplying West Virginia consumers exclusively.

A. That I am hardly in a position to answer. I might say this:

That at Cameron, West Virginia, there are two companies furnishing gas to cousumers in that place, in addition to a few which we supply. The one company, I believe, began operations in 1911, the second in 1913. I believe that our company was operating in there,—oh, I imagine in 1889 or perhaps 1890.

Q. Well, do you know of any local companies in West Virginia,—or what is the earliest date that you know of any company being organized in West Virginia for the purpose of supplying local consumers in West Virginia exclusively—I mean, as distinguished from these companies supplying both in West Virginia and in other States?

A. The Dunkard Valley Gas Company at Blacksville, West Virgania, I am told, began operations in 1886. That is the earliest one I know of.

Q. Are you familiar with, as part of your duties as Manager of the Manufacturers' Company, and keep advised as to the operations and the developments of gas territory by local companies in West Virginia as well as these other companies?

A. Any company, no matter who, that operate- in the same districts in which we operate, we keep informed as to their operations, to the best of our ability.

87 Q. Now, then, what is the fact with reference to those local companies in West Virginia supplying West Virginia consumers only, obtaining and holding reserve acreage, for the purpose of supplying their consumers?

A. The reserve acreage—or the acreage, rather, that those companies have that I am familiar with, is very small.

Q. Has it been the practice of those companies to hold in the same proportion reserve acreage, and drill additional wells to take care of their consumption, in the same way as the larger companies, or the companies generally supplying gas in Pennsylvania and Ohio as well as in West Virginia?

A. The amount of acreage held is small, as I stated; and, as a general proposition, their operations are rather restricted, drilling when forced to, when there is an insufficient supply.

Q. What is the practice and custom and usage of the trade, or a company supplying in any territory, as to its making foresighted provision, by reserve acreage and additional wells, to take care of its prospective consumption?

A. Any company I know of, if there is gas territory available, which has indications of being gas-producing territory, they lease, or undertake to lease, practically as much as they can secure. Relative to the drilling, the nature of the industry is so peculiar,

88 inasmuch that in cold weather they are called upon to supply large quantities of gas, that it is necessary for them to drill sufficient wells to take care of this extraordinary demand, or what the gas man styles "peak load," in the winter time. These additional wells provide fuel that ordinarily would not be required for perhaps, say ten months out of the year. In other words, it creates a surplus gas flow. Again, it takes some months to complete a well, and a gas

company which provides good service has that in advance before it is really called upon to furnish it.

Q. Do you know whether or not these local companies in West Virginia, supplying local communities there, were able to pay dividends to their stockholders upon their capital stock, when the larger companies engaged in supplying gas not only in West Virginia but in other States were unable to pay such dividends? Now, the question was simply if you know.

A. Only by information.

Q. Well, have you obtained information on that subject?—Just answer that yes or no.

A. Yes.

Q. Now, I will ask you the question, What is your information upon that subject?

89 Mr. Hoffheimer: We object to this line of evidence, as having no bearing on the issues involved in this case; particularly as having no bearing upon the regulatory power of the State of West Virginia, or the validity or operation of the legislation in question; and as incompetent, irrelevant and immaterial.

Mr. Weil: For the information of the Court, the testimony offered is for the purpose of showing that the local companies in West Virginia which supplied local communities made no foresighted provision for the supplying of those communities with gas by obtaining additional territory—or reserve territory, as it is called by the trade—and drilling or buying gas wells, for the purpose or supplying that trade, but instead, paid out of their earnings currently whatever was received, and thus were enabled to pay dividends upon their capital stock; while these companies engaged in interstate commerce, as alleged by the complainants, which made such foresighted provision, obtained such territory and made the expenditures

90 necessary in drilling and purchasing wells, were unable to pay such dividends; and that, under the provisions of the Act now under consideration, these interstate companies would be compelled to supply these local companies with gas which they now require for their respective communities, notwithstanding the fact that these companies made no such provisions,—this at the cost and expense of these interstate companies, and to the deprivation of their consumers for whom these foresighted provisions were made.

Mr. Hoffheimer: The State of West Virginia objects to the proffered line of testimony, upon the grounds previously stated; and also for the reason that whether or not this company, or any other company whose affairs may be brought into question here, has paid a dividend or can or will pay a dividend, cannot be the measure of the validity or invalidity of this statute or its operation; for the further reason that if we are to go into the question of dividend payments, or ability to pay dividends, we should have this case converted into the question of rate making, with which neither this case nor this statute has anything to do. Whether or not compliance

91 with this statute will bring into operation rates at one figure or another is a matter to be determined when the statute is

put into force, and, if it shall then appear that reasonable rates are not allowed, having in view the existence of this statute, and the proper elements going into the question of rate making to the companies of reasonable rates, that is a consideration with which this proceeding has nothing to do.

We object further to the procedure whereby this record is encumbered, or to be encumbered, by argumentative statements in reply to necessary objections, made by the opposing parties; and, in order to impress that objection, we move to strike out the statement made by Mr. Weil in opposition to the previous objection made by the State of West Virginia.

Mr. Weil: With reference to the last statement and motion, it is the practice in the State and Federal Courts of Pennsylvania, where a question is propounded and is objected to, to make an offer upon the record of what it is proposed to prove and the pur-
92 pose thereof; and that practice has simply been followed in this case, and will be continued, as being within the rights, the duties and the obligations of counsel; and for the information of the Court, not as implied in the statement—as an argument.

Mr. Hoffheimer: With all the good nature in the world, but, in order to be consistent, I repeat my last objection and move to strike out the last statement made by counsel for the opposing party.

The Commissioner: Let the objection be noted, and the answer to the question taken.

(Question repeated, as appearing on page 88 hereof.)

Mr. Weil:

Q. I don't mean by that, to go into the names of particular companies, and so forth, but just as to the general fact.

A. With one exception, the information is that they paid large dividends.

Q. From the records of your company, what is the comparison between the consumption of domestic consumers in West Virginia, as compared with the domestic consumers in other States,—as
93 to the amount per consumer used by the domestic consumers in Pennsylvania, compared to those in other States?

Mr. Blue: The State of West Virginia, by counsel, objects to the foregoing question and excepts to the answer thereto, as irrelevant and immaterial.

The Commissioner: Let the objection be noted, and the answer taken.

A. I have no data on that that I could give. In our company,—or, rather, I have taken the average consumption per year per consumer, and have never paid any great attention to what each consumer would average in each particular State. I cannot answer that definitely.

Mr. Weil:

Q. Did your company at any time supply industrial consumers in West Virginia?

A. They do, yes, sir,—and have.

Q. And did they formerly?

A. Yes, sir.

Q. I wish you would give us the facts as to the quantities of gas consumed by industries in West Virginia which you cut off from the use of natural gas?

94 A. To discontinue entirely, I don't know of any particular ones at this time. We have restricted greatly the use of gas by industrial consumers, and at times have discontinued entirely temporarily their supply.

Q. The question was intended to elicit the information as to the different departments, as well as the industries as a whole, which you cut off; and I wanted to obtain the information as to the quantities that some of these industries use?

A. The amount of gas, you mean?

Q. Yes,—giving us the names of some of them?

A. Take Follansbee Brothers, they manufacture tin plate——

Q. Now, wait a moment. Where are they located?

A. Located at Follansbee, West Virginia. There have been times that their requirements have run approximately 4,000,000 cubic feet per day.

Q. And for what purposes did you supply gas to that industry at that time?

A. Used generally throughout their plant.

Q. And they used the gas in what department?

A. Used it for boiler use, for the purpose of galvanizing, tinning; they used it for annealing purposes; lighting and heating.

Q. And when was that, how long ago did you supply them as much as that?

A. Within the past four years, I would say.

95 Q. And what are the facts now? What departments do you supply?

A. Practically only the tinning department. I don't—there might be times now that we are supplying some gas for annealing.

Q. About what quantity do you supply them now,—just an average?

A. I would say, at the present time, perhaps not to exceed 300,000 cubic feet.

Q. Now, give us some other companies.

A. The Wheeling Steel & Iron Company, located at Wheeling, West Virginia. We formerly sold them gas amounting to 2,500,000 to 3,000,000 cubic feet per day.

Q. What do they use now?

A. During the winter, they have been practically using no gas,—natural gas.

Q. Give us some other companies?

A. Take the Fostoria Glass Company, located at Moundsville, West Virginia. Their daily requirements a few years ago ran approximately 1,200,000 feet a day. During the past winter it would run perhaps 300,000, somewhere in that neighborhood.

Q. What did they use the larger amount for, what departments?

A. When they were using the full supply of gas, they used gas for the purpose of heating their tanks, glory holes, their layers, and high arches, and so forth,—gas engines.

96 Q. And what do they use it for now?

A. They are using natural gas now principally for their glory holes, and, with the assistance of producer gas, their layers.

Q. All right, give us some of the others.

A. Take the United Stamping Company, located at Moundsville. Their daily requirements ran approximately a million and a half cubic feet per day.

Q. How many years ago?

A. Within the past three or four years—five years. Their requirements now, in the winter time, have been as low as 60,000 feet to 80,000 feet per day.

Q. What would you say would be a fair average?

A. I would say 200,000 feet, during the past winter, would be a fair average.

Q. When you say "their requirements," what do you mean by that?

A. Their requirements, I considered as meaning all gas that they would desire to use, if there was an abundance, and had it for different purposes, or desired to use it—they would use it generally throughout their plant.

Q. And "under the present conditions," what do you mean by that?

A. Under the present conditions, there are times, in winter, that there is not sufficient gas to supply the industrial trade, and we restrict the amount of gas furnished each.

97 Q. All right, give us some other companies.

A. New Martinsville Window Glass factory, located at New Martinsville, West Virginia. Their requirements formerly were along 400,000 cubic feet per day. Their requirements, or gas furnished them during the past winter has been as low as 80,000, perhaps less, per day; a fair average, I would say, would be perhaps 100 or 120,000 cubic feet per day.

Q. Well, give us some others.

A. The Northwood Glass factory, located at Wheeling, West Virginia. Their requirements would run approximately a million cubic feet per day.

Q. How many years ago?

A. Within a period of from three or four to five years; in fact, in that particular instance, within the last year, there have been times during the past winter when the amount furnished them would be a trifle over 200,000 cubic feet per day. I might say that is one industrial concern on our lines which did not provide them-

selves with some substitute fuel—they only installed and began operation of substitute fuel, I believe some time about the first of February.

Q. What was that company?

A. That was the Northwood Glass Company, the last company I mentioned.

98 Q. What others?

A. We have a large consumer, the Laughlin China Company, located at Newell, West Virginia. They are engaged in the manufacture of pottery, and the amount of gas consumed varies greatly each day, depending entirely on the number of kilns fired. Their monthly requirements are approximately 90,000,000 cubic feet, which would average—better than 90,000,000 cubic feet, which would make a daily average of approximately better than 3,000,000 cubic feet.

Q. When was that?

A. That is within the past year—two or three or four years.

Q. How much are you supplying them now?

A. During the past winter, I think it was one month, January or February, their monthly consumption amounted to 30 or 31,000,000 cubic feet. They fired with coal—that is, a great number of their kilns, with coal.

Q. Well, can you give us any others?

A. That, in a general way, is about the situation with all.

Q. Did you ever supply the La Belle Company—the La Belle Iron Works?

A. Yes, the La Belle Iron Works, I presume—there are three or four plants of the La Belle Iron Works that we supply. The one in East Virginia, there have been no large amounts that I recollect being furnished the La Belle Iron Works while I have been

99 with them. If it was, it was in the very early days.

Q. Did you supply the Weirton Steel Company with any gas?

A. We supplied the Weirton Steel Company, which is located at Weirton, West Virginia, with gas. Their requirements ran approximately a million, or a million and a half.

Q. A day?

A. A day.

Q. When was that their requirements ran that amount, at what period?

A. The amount they used?

Q. At what period?

A. Within a period of three, four, or five years.

Q. And what now?

A. I would say that they perhaps average 100,000 cubic feet per day.

Q. Well, can you recall any other of the larger companies?

A. In West Virginia?

Q. Yes.

A. No, I think that covers the larger companies in West Virginia.

Q. Have you made any estimates of the quantity of gas that

would be required to supply the industrial plants in West Virginia, if you were required to supply them with all of their requirements? As to the amount of gas that they would take?

100 A. I have.

Q. And of what plants?

A. I have taken every industrial consumer at present connected to the lines of the manufacturers Company in West Virginia.

Q. Now then, taking the industrial plants in West Virginia that are now connected with the lines of the Manufacturers Company, what would be the estimated quantity of gas that you would have to furnish to them, if required by law to supply them with their full requirements?

A. If we were called upon to supply natural gas to meet all the requirements of the gas which they may desire to use, in all of the industrial plants, manufacturing companies, in West Virginia, it would require between 25 and 33,000,000 cubic feet per day.

Q. As I understand your answer, that applies only to those industrial plants that are connected with your own lines?

A. Yes.

Q. And of which you have information?

A. Yes.

Q. Does that include, in this estimate, the supplying of gas for use in the boilers or power plants of these companies, as well as for other purposes?

A. It does, to this extent: That it being an estimate, of course we estimated it. We took what we know has been their previous

101 consumption, together with information as to what the consumer has told us from time to time as to the amount of gas he could use, or might desire to use.

Q. Have you a list of those companies?

A. With me?

Q. Yes.

A. I have a partial list, of some of the larger companies.

Q. Just name them, please.

A. The Weirton Steel Company, Weirton, West Virginia; Wheeling Steel & Iron Company, Wheeling, West Virginia; the La Belle Iron Works, Wheeling, West Virginia; Whittaker Glass Company, Wheeling, West Virginia; Follansbee Brothers, Wellsburg, West Virginia; Fostoria Glass Company, Moundsville, West Virginia; United States Stamping Company, Moundsville, West Virginia. Those are the larger ones. Outside of the Homer Laughlin China Company, at Newell, West Virginia, the Smith and Taylor Company, at Chester, West Virginia, those are the larger plants. We have a total of 67 industrial consumers in the State.

Q. Have you made an estimate of the quantity of gas that you now supply to these same companies?

A. A minimum of 1,493,000 cubic feet.

Q. And what is the maximum?

A. The maximum, as I stated, would run between 25 and 33,000,000 cubic feet.

102 Q. No, I am not speaking of their requirements; I mean, what you are now supplying.

A. At the present time?

Q. Yes.

A. I will tell you, Mr. Weil, the interruptions to the industrial consumer have been frequent, some days being on in full, at other times restricted fifty per cent, and then here one day last week, I believe, entirely curtailed. It would be rather hard for me to answer that question. I can secure the information, though, and have it available in the morning for you. I would say, roughly, probably 6,000,000 feet.

Q. That is, a day?

A. A day, yes.

Q. There are a large number of industrial plants in West Virginia which, of course, are not connected with your lines, but connected with the lines of other companies, are there not?

A. Yes, sir.

Q. Did the Manufacturers Light & Heat Company or any of the other natural gas companies with which you were connected, the names of which you have already given, offer inducements to industries to locate at any points in West Virginia, by offering low-priced gas? And if so, when and where?

103 A. None that I know of.

Q. Those industries which you have described as connected with your lines, what, if any, provision have they made for other fuel in place of the natural gas which at one time you supplied to them?

A. Beginning with Follansbee Brothers, Follansbee——

Q. I don't care to go into each one, just state in a general way.

A. They have provided themselves with powdered coal, producer gas, fuel oil and other substitute fuels.

Q. Has there been any manipulation of the gas pressure on the lines of companies with which you have been connected, in the State of West Virginia, in order to prevent other operators of wells not owned by you from putting their gas into the lines?

A. None that I know of.

Q. What has been your experience as to the percentage of gas that will be discharged into the lines of your companies, as compared with the open flow of the well?

A. That, of course, would depend on the relative pressures of the well and of the line. The general amount, we figure that approximately 25 per cent of the open flow enters the line, under average conditions.

Q. Is that true of your own wells—the wells owned by your

104 company?

A. That is our belief, yes—approximately.

Q. Just explain what is meant by the "open flow."

A. The open flow of a well represents the amount of gas which that well puts out against the atmospheric pressure in the open air.

Q. And why is it that only 25 per cent of this, as estimated, is discharged into your lines?

A. It is impossible, of course, to maintain atmospheric pressure in your gas lines and convey gas to market. It is necessary to have the gas under pressure in order that the gas would be forced to

market. The gas coming from the well would first have to counteract and to overcome whatever pressure was on the gas then confined in your line; above that it would feed in.

Q. And the larger that pressure——

A. The higher that pressure, the less volume the well will produce.

Q. Does it sometimes happen that gas from the lines will flow into the well, instead of from the well into the lines?

A. It does, yes, sir.

Q. Are there any appliances in use by the trade for the purpose of preventing this?

A. Most all wells that are connected to lines now have a check valve installed on a side line, which would prevent it, in the event the check valve were working properly.

105 Q. What are the facts now as to competitive leasing by the respective companies, as compared with former conditions?

A. The competitive bidding for leases, I consider, is very much more extensive now than perhaps formerly. There is keen competition for leases.

Q. Is there any arrangement between your company and any of the other large companies operating in West Virginia, or any of the companies operating in West Virginia—and if so, what—with reference to not competing in the obtaining of leases for prospective gas territory?

A. There is none that I am aware of, none that I know of.

Q. What has been your experience, and, from your knowledge of the business, what is the result of this competitive leasing on the part of the gas companies and the drilling of wells upon adjacent territory, as to the exhausting of gas and the necessity of marketing the same?

A. Competitive bidding for territory makes it feasible, and has made it so, that various companies start operations in that field and, of course, drill wells and discover available gas, and, in order to secure returns from that gas, they market or sell the same.

Q. And what is the effect——

A. The effect has been that there has been a sort of a scramble on the part of each company to sell large quantities of gas, and has had the effect of diminishing greatly the former amount of

106 gas available for use. It has resulted in a condition whereby most gas companies are unable to supply all of their consumers with all of their requirements at all times. It has created shortages.

Q. What is the storage capacity or reservoir capacity of the lines of the Manufacturers Company with references to its daily consumption?

A. Very small, very small. The storage capacity of our company would consist simply of the amount of gas that would be confined in our pipe line system.

Q. And could that gas thus confined or stored in what we call the pipe line system, or reservoir, be at all used, unless other gas was put into the line to meet the consumption?

A. It would only last a comparatively small part of the day—of course depending entirely on the time of year, and so forth.

Q. Have you read the Act of Assembly in controversy here, the title of which is "A bill in relation to persons, firms and corporations engaged in furnishing, or required by law to furnish, natural gas for public use within this State, to provide remedies for the enforcement of this Act and penalties and punishment for violations thereof, and to extend the jurisdiction of the Public Service Commission and of the courts of this State with respect thereto"?

107 A. Yes, sir.

Q. If this Bill should go into effect and be enforced in the State of West Virginia, from your knowledge of the conditions in West Virginia, the operation of your lines, and the demands that would be made thereon from time to time by others in accordance with the provisions of this Statute, what would be its effect, or the effect of such enforcement of the Act upon the operations of your company, with respect to transporting gas from West Virginia into other States?

Mr. Hoffheimer: That is objected to,—first, as calling for an inadmissible opinion or conclusion of the witness; secondly, as calling for an opinion or conclusion of the law; thirdly, as not a subject of opinion of expert testimony; fourthly, because no facts have been shown upon which such opinion could be legitimately expressed; and, fifthly, because the evidence is incompetent, irrelevant and immaterial.

The Commissioner: Let the objection be noted, and the answer taken.

A. I would say that, if my company was compelled to fur-

108 nish gas in an amount equal to the possible requirements of all of our customers, connected to our lines in the State of West Virginia—and that would apply to all other companies in the State as well—that it would practically demoralize our business in the States of Pennsylvania and Ohio. It would make the physical operation of the property absolutely problematical; you wouldn't know what your requirements were going to be for a certainty in the State. It would result in very severe shortages in the State of Pennsylvania, for instances. During this past winter our company was short in its supply, for instance, in the city of New Castle, twenty-four days; there were periods of several days at a time in which there was practically no gas in parts of the city of New Castle. Our company had shortages throughout the Beaver Valley, at New Brighton, Beaver Falls, Rochester. We had shortages much nearer,—at Sewickley and in Pittsburgh, some three or four times; shortages in Bellevue, Avalon, and other towns, there were times when they were practically out of gas, not sufficient even for cooking. The town of Steubenville, or the city of Steubenville, Ohio, suffered from shortages five or six different times. East Liverpool fared better. We were short in the town of New Cumberland, West Virginia. We were short of gas in the towns of Martins Ferry,

Bridgeport, and I think one or two shortages in Bellaire,
109 Ohio. These shortages occurred at times when we were utilizing all the gas that we could possibly purchase, and at times when we were using all of the gas which our own company produced, and at times when we had the entire industrial load of this company in the States of West Virginia, Ohio and Pennsylvania discontinued. For that reason, I base my opinion, if we were called upon to supply ten, fifteen, twenty or twenty-five million feet a day in addition to the amounts that we were furnishing, or if that amount of gas was taken out of the distribution end of the States of Pennsylvania and Ohio and used in West Virginia prior to the time that it got into the lines in those two States, it would mean that there would be times there would be practically no gas in a great many lines of the company in the two States of Ohio and Pennsylvania. It would create, from an operating standpoint, a very, very dangerous situation. I I know of no condition in the industry which bothers, or is more dangerous to, life and property than a shortage existing in your system. Consumers, when a shortage occurs, naturally desiring to keep warm and to utilize the gas, open, for instance, their valves wide, in order to obtain as much gas as possible; and sometimes they leave the home and go to purchase something, or go to theatres, they leave the house for various reasons, leaving the gas regulated per-
110 haps with valves wide open; there is a lull or decrease in the demand placed upon the company, and your pressure begins to pick up, the flame in the stove becomes stronger, more full,—in many instances, when the pressure regains normal, the flame is coming out over the consumer's stove, creating a blaze which sets his home afire. At other times people might go to bed, permitting the heating stove to burn in their home; perhaps the pressure declines and the flame becomes extinguished; the pressure naturally increases at night after people have gone to bed, because a great many people have a habit of restricting the amount that is used from the midnight hours; the pressure accumulates, and the gas comes back into the consumer's home, into his room, and asphyxiates him. There is no situation so critical, I consider, as an insufficient supply of gas, or a supply of gas which is liable to go completely out and then come back on at unknown times. Again, if the service of a consumer is interrupted, no matter whether it is an industrial or a domestic consumer, he realizes that he can place no dependence on the service; he was depending on it for heating, and he found he was not getting sufficient gas for that purpose, and was forced to put in a substitute fuel; if he could not secure gas for cooking purposes or lighting his home regularly, satisfactorily to him,
111 he would be compelled to secure other fuel, substitute fuel.

Mr. Hoffheimer: I move to strike out the answer, on the ground stated in the objection to the question, and also for the reason that, while eloquent, the answer consists of mere argument; also, the same is not responsive to the question.

Mr. Weil:

Q. What would be the effect upon the operation of the lines of your company if, at any time during the colder weather of winter, you were compelled to make a connection with the lines of companies in West Virginia supplying some of the larger cities or towns in West Virginia, in order to make up the deficit of gas of those local companies in so supplying the towns or cities which were upon their lines,—what would be the effect of being compelled to make such connections, upon the operations of your plant?

Mr. Hoffheimer: I repeat the same objection made to the last preceding question.

The Commissioner: Let the objection be noted and the answer taken.

112 A. It would have the result of further restricting the amount of gas available for customers in the States of Pennsylvania and Ohio.

Mr. Weil:

Q. Well, what would be the effect upon the actual operation of your lines, besides the restriction or diminution of the quantity?

Same objection.

A. It would further increase the shortages which we have at the present time on our lines.

An adjournment was here taken until Thursday, May 13th, 1920, at 10:00 o'clock A. M.

113 Thursday's Session.

(May 13th, 1920.)

And now Thursday, May 13th, 1920, the hour of 10:00 A. M., having arrived, parties met pursuant to adjournment.

HARRY A. QUAY resumes stand.

Direct examination (continued).

Mr. Weil:

Q. Mr. Quay, are your main transmission lines, or practically all of your transmission lines from West Virginia, connected onto the general transmission system of the company that runs into Pennsylvania, or are they separate main lines which have no connection one with the other?

A. They are connected one with the other.

Q. So as to constitute one general transmission system?

A. One large general system.

Q. What effect would the removal of gas from any portion of that system in West Virginia have upon the transmission of the gas into Pennsylvania? In other words, would it affect it?

A. It would.

Q. Would you be able to tell, or could you tell in any way,
114 or have you any devices upon the lines by which you could tell as to where the effect would be most appreciable in Pennsylvania, if thus removed in West Virginia?

A. If I get the question right,—in fact, I don't get it right.

Q. Well, I will put it in a different form then: Is there any means of ascertaining, where any portion of gas is removed from the system in West Virginia, where it will have its greatest effect in Pennsylvania.

A. There is.

Q. Just tell us about that.

A. To remove,—I presume you mean if taken out and transported to other points in the lines in West Virginia, where it would have its effect in Pennsylvania?

Q. Where, yes,—where it would have its effect in Pennsylvania?

A. It would have its effect in all the lines in Pennsylvania, more particularly at the extreme end.

Q. And the extent of that effect, I presume, naturally would depend upon the quantity thus taken out?

A. It would.

Q. And if a large enough quantity was taken out,—that is, a large quantity, was taken out, could you then tell—and if so, how—where it would have its effect in Pennsylvania?

A. If a large quantity of gas is taken, of course it creates shortages in certain portions of the system, depending entirely upon the quantity taken out.

115 And where, what points in the system would it chiefly affect—I mean, in Pennsylvania?

A. The farthest point away from the source of supply.

Q. Under the present system of operation of your lines in West Virginia, state what the facts are as to the West Virginia consumers getting, during times of shortages at other points, their proportion of gas from the lines.

A. The domestic consumers in the State of West Virginia have not suffered any shortage.

Q. You mean those on your lines?

A. On our lines. With the exception of the domestic consumers in the town of New Cumberland, Hancock County, West Virginia. The domestic consumers in Ohio have suffered shortages; the shortage the past winter in the city of Steubenville, for domestic consumers, at Martins Ferry, Bridgeport and Bellaire, Ohio, has been marked. The shortage for domestic consumers on the lines of our company in the city of New Castle has been very severe; there have been at least twenty-four different shortages in that city, some periods of time there being no gas whatsoever in the lines for their use. New Brighton, Beaver Falls, Rochester, various smaller communities in the Beaver Valley have experienced severe shortages.

In the district, the domestic consumers in and surrounding Pittsburgh, Bellevue, Avalon, and in that territory have suffered
116 three or four severe shortages, in some cases there being no gas or not sufficient gas so that any would burn in their homes.

Relative to the industrial consumers connected to our lines in the State of Pennsylvania, the quantity of gas furnished them has been greatly curtailed. The same condition existed as to industrial consumers on our lines in Ohio. Relative to the industrial consumers on our lines in West Virginia, they have been greatly handicapped as well, although at any time when there was surplus gas over and above the requirements of the domestic consumers, and not sufficient to permit all of the industrial consumers on our lines to have gas, we have distributed, or gave to each of the industrial consumers in the State of West Virginia at least some portion of their requirements. I mean by that, that there have been many times when the industrial consumer in West Virginia has received gas, while industrial consumers in the other two States were not permitted any.

Q. While we are talking now about these industrial consumers, and so forth, what have you done with reference to withdrawing your industrial rate in Pennsylvania—or industrial classification in Pennsylvania and in Ohio?

A. The company has withdrawn its industrial classification in the States of Pennsylvania and Ohio.

117 Q. What is the practice of the company, and what has been its practice and policy since that time, during the last year—and at present—in dealing with industrial consumers?

A. The company's practice has been to curtail the amount of gas furnished the industrial consumer. It has not made or entered into any contracts with any new industrial consumers, other than three or four made during the time the Fuel Administration had the operation of the company under license.

Q. You mean the United States Fuel Administration?

A. Yes. In making, or renewing the contracts with those of its old customers who have been on its lines, we did not undertake to contract for, nor did we contract for, their full requirements. We undertake, and only contract to supply, or attempt to supply, sufficient gas for such subjects in their plant in which other fuel cannot be readily substituted. With the exception of boilers used for the purpose of drilling, we have not entered into any contract to supply gas to boilers. Any plant which has had a producer installed for the purpose of making producer gas, and which has not had the same in operation, has been requested and required to use the same.

Mr. Hoffheimer: While we are not able to foresee the possible development of this line of evidence, we reserve the right to
118 move to strike it out, and to require the production of contracts referred to, in so far as they may be in writing, under the Best Evidence Rule.

Mr. Weil:

Q. In your contracts with industrial consumers, since the withdrawal of the classification, what is the stipulation of the company

with reference to supplying them only out of their surplus gas, after supplying domestic consumers?

A. There is a clause in each contract under which the company reserves the right to temporarily discontinue in whole or in part the supply of gas furnished them, in the event that the domestic consumers require all the gas which the company has available.

Q. Is that done with every consumer in Pennsylvania and Ohio?

A. Yes, sir.

Q. Every industrial consumer, I mean.

A. Yes, sir.

Q. During the last year, last winter, as a matter of fact, did you shut off, at certain periods, all of the industrial consumers upon your line; and if so, what periods?

A. There were many periods during the past winter when the supply of gas furnished to industrial consumers in the States of Pennsylvania and Ohio was discontinued and shut off.

119 Q. And for how long periods did that continue, from time to time?

A. That period,—oh, Mr. Weil, it would run for days at a time.

Q. Well, that is what I wanted to show, whether it was just for a few minutes or for any considerable time. What were the facts, during those periods when the industrial consumers were shut off, as to your then having enough gas for your domestic consumers?

A. There was not sufficient gas for our domestic consumers, even though we had discontinued the supply to the industrial consumers.

Q. What is the practice of the company in its operations, in shutting off an industrial consumer, with reference to the investigation of conditions at the plant of the industrial consumer?

A. The practice showed us that, although we could issue orders and instructions to discontinue the supply of gas furnished them, we found it necessary to patrol and visit practically each industrial plant on our system, for the purpose of ascertaining, satisfying ourselves that the order was obeyed and the gas discontinued, as ordered. We have found it necessary to do that constantly,

120 day and night. The tendency of some industrial consumers was to use the gas, further affecting the shortage which would then be existing on our lines. It is the only manner in which we can positively stop them from using the gas.

Q. Do you make any investigations, in shutting off gas from industrial consumers, as to the losses that will be thereby entailed upon such industrial consumers; and, if so, what?

A. I have had a great many tell me of the thousands, and hundreds of thousands, of dollars that they have lost by having the supply of gas discontinued, and causing a shut-down or hindrance in their operations. Only a very short time ago, one pottery in East Liverpool stated to me that, due to the discontinuance of the supply of gas in the months of January and February, their loss was $100,000.

Mr. Hoffheimer: I think I should move to strike out the very obvious hearsay, as going a little beyond even tolerable limits here.

Mr. Weil: I would say that the information that was given was

not what the interrogation was intended to obtain; and, so far as counsel for complainants are concerned, that portion of the evidence may be stricken out.

121 Mr. Weil:

Q. The portion of your line in what is called the Panhandle of West Virginia—Panhandle District—which are the largest towns in that district, supplied by you?

A. The town of Chester, town of New Cumberland, Weirton, Holliday's Cove, Follansbee and Wellsburg.

Q. Are any of those towns in that Panhandle supplied by your lines with gas substantially all from Pennsylvania?

A. Yes, sir.

Q. Which?

A. I would say that there are probably many times when every one of those towns are being supplied with gas coming from Pennsylvania or Ohio.

Q. And what would you say as to Chester and New Cumberland?

A. Chester and New Cumberland, there can be no question but that both those towns are supplied from gas coming from Pennsylvania into West Virginia and from Ohio into West Virginia.

Q. What portion of the time, would you say?

A. At all times.

Q. If a sufficient quantity of gas was taken out of your lines to comply with the provisions of this West Virginia Act in controversy here, what would be the effect thereof, as to gas from Pennsylvania flowing into the State to take its place in the lines?

122 A. Well, it would, of course, mean that the gas from Pennsylvania would be more inclined to flow into the State of West Virginia.

Q. It would depend, would it not, upon the quantity and the length of time it was taken out?

A. It would.

Q. Calling your attention to certain sections of the lines and operations of your company, as, for example, in the Majorsville district, and south of that, on the line between Pennsylvania and West Virginia, and in the Hundred district near the line between Pennsylvania and West Virginia, in all of those sections, as shown in this map—(referring to Pennsylvania Exhibit No. 1)—there are operations, are there not, on both sides of the State line?

A. Yes, sir.

Q. And when I say "operations," I mean there are gas wells drilled and producing gas.

A. Yes, sir.

Q. As to the Majorsville section, I believe you stated this map does not show all of the wells, but just the general gathering lines.

A. The map does not show all the wells.

Q. Well now, have you any recollection as to about the

123 number of wells in that immediate section—Majorsville, say, and south of that?

A. We have, all told, in the district, something over 400 oil and gas wells combined. I would not be in position to give you the number of gas wells alone.

Q. In that section?

A. In that section.

Q. Now, are some of those wells on one side of the State line and some on the other?

A. Yes, sir.

Q. Some in West Virginia and some in Pennsylvania?

A. And some in Pennsylvania.

Q. And how close are some of them to the line—to the State line?

A. I don't know. If my recollection is correct, there are a few of those wells that are very close to the State line, quite close.

Q. Is there any way for the operator to tell whether the gas coming into those wells on either one or the other side of the line is taking its gas either from West Virginia or Pennsylvania?

A. I know of no way, no.

Q. What is the fact as to the distance at which a well will drain adjacent territory? Is there any rule on the subject?

124 A. No known rule that I have ever heard of.

Q. What is the experience of operators in that particular, as to the distance from which a well will sometimes draw its production, as illustrated by other wells?

A. I have known wells within a proximity, say of one well located 300 feet from the farm line, another well located say 300 feet on the opposite side of the farm line, making a total distance, say, of approximately 600 feet, with no appreciable effect,—that is, I mean by that, that one of these wells had been drilled, and the second well, as I stated, approximately 600 feet away, was drilled, it had no appreciable effect on the volume of gas the original well was producing. On the other hand, take this McKeesport gas field, there are wells there,—it has been our experience, at least, that practically every well of any size that is drilled into the McKeesport gas field affects the production of every other well,—practically so—in the field.

Q. And how big a field is that in acreage, would you say?

A. Very, very small, comparatively.

Q. Well, about how many acres in the whole field?

A. Oh, I would say,—I was going to say that a mile square would cover the whole field.

Q. Well now, how large a distance have you known—in your experience as an operator—one well to affect the production

125 of another, showing that its drainage extended that distance?

A. Why, I wouldn't know, Mr. Weil; they vary so; some wells are affected, and others are not.

Q. I understand that, but I just want an illustration; about how far, according to your recollection now, was the longest distance?

A. Well, in this McKeesport field, I think I would be safe in saying approximately a mile.

Q. Have you known any wells in any other fields, of any greater distance than that, that you can recall at the moment?

A. I do not.

Q. Whether or not it so affects, depends, does it not, upon the porosity of the sand?

A. Some people state that it is perhaps due to a looseness or hardness of the sand, but I know of no way really to determine what does cause those things.

Q. As a matter of fact, is there any explanation of it known to the trade?

A. None that I know of.

Q. What would be the effect upon the domestic consumers of your company in the State of Pennsylvania if, through the operation of this Act now in controversy here, a large portion of the gas now being obtained by your company and transported from West
126 Virginia and Pennsylvania was shut off or consumed in West Virginia, as to their health and comfort?

A. It would affect seriously their health and comfort.

Mr. Hoffheimer: I move to strike out that answer, as a statement of a conclusion; we have no objection to concrete facts being stated by the witness.

Mr. Weil:

Q. How?

A. By creating a shortage in the gas supply, which would not permit our company to furnish them any, leaving them without any heating, or fuel for cooking, or heat for heating water, things *for* that kind.

Q. As to your industrial consumers in the State of Pennsylvania, if you are compelled to give the preference to the industries in West Virginia, and the domestic consumers in West Virginia as well, what would be the effect of such preference upon your industrial consumers in Pennsylvania; and what would be the effect upon the industrial consumers in West Virginia.

A. I would not be in position to furnish any gas to any industrial consumers whatsoever.

Q. What effect would that have as to competition, as between the respective industries in Pennsylvania and in West Virginia that engage in the same lines of activity?

127 Mr. Hoffheimer: That is objected to, as irrelevant and immaterial.

The Commissioner: Let the objection be noted, and the witness may answer the question.

A. I would say that the industrial consumers in the States of Pennsylvania and Ohio would be handicapped in their operations, while those industrial consumers in the State of West Virginia who had a supply of gas would not be handicapped in their operations.

Mr. Hoffheimer: I move to strike out the conclusion contained in the answer.

Mr. Weil:

Q. What is the fact as to gas as fuel in industrial enterprises, as compared with other fuels?

A. The industrial consumers on our lines have equipped themselves, or the majority of them have——

Q. No, that wasn't the line of inquiry I wanted to develop, Mr. Quay. I want to ask you what, if any, advantages are there in burning natural gas, over other fuel?

128 A. There are advantages in natural gas as a fuel.

Q. And what are they?

A. First, in the heating value of natural gas, the manner in which this heat can be applied, the manner in which gas can be used. There are some industrial consumers on our lines who have no storage capacity for other fuels, as their plants are now constructed,—and things of that nature. A great many of them would have to change their plants. Owing to the use of natural gas, there are some of them who have appliances constructed especially for the use of natural gas.

Q. If the domestic consumers in Pennsylvania and Ohio, through the operation of this Act, should be prevented from obtaining a supply of natural gas, what would be the average cost and expense to which domestic consumers would be subjected in installing other appliances to heat their houses, for cooking and hot water heating?

A. I would say that I consider it would cost those consumers on an average of at least $200 per consumer, to substitute other fuel for the purpose of cooking, heating and lighting their homes.

Q. What items do you take into consideration in making that estimate?

A. In making that estimate, I took into consideration the fact that last fall I put in substitute heating appliances, sub-

129 stitute lighting appliances, in my home, which cost me two hundred and approximately seventy-five dollars for my heater and the accessories; wiring my home for electric lights, the total expense was approximately $250. I secured prices on coal cook stoves; one cannot purchase at these times a very elaborate cook stove—coal cook stove—short of $40 or $50.

Q. Do you mean a very elaborate stove?

A. They cannot buy a very elaborate cook stove.

Q. Well, I said, do you mean a very elaborate stove, when you say $40 or $50?

A. No, you cannot buy much of a coal cook stove for that price. Realizing that perhaps the expense incurred by me in our place was much higher than it would be in the average, I threw off a couple or three hundred dollars and figured that $200 would perhaps be much lower that it would cost the average customer.

Q. We have had some reference during the examination to what you term "peak load" upon the lines of the natural gas companies. I wish you would give us somewhat in detail what you mean by the "peak load"—what it is, and what it means in the operation of gas companies.

A. The peak load period of a natural gas company occurs in the

extreme cold weather. During the summer gas is used practically only for the purposes of cooking, lighting and hot water heating for bathroom purposes, and so forth; as colder weather approaches in the fall, stoves—heating stoves, grates and furnaces—are used; the temperature being rather moderate, these various appliances that I have mentioned are not used to their fullest extent; as more severe cold weather approaches, more of these appliances mentioned are put in operation and used to a greater extent—at times, when there is extreme cold weather, each customer on our lines is no doubt using every subject—or practically every subject—in his home which he has for the purpose of heating; the extreme cold weather must be counteracted by the heat, and he uses all of his appliances, and uses them to their fullest extent. All of our customers doing this has the effect of creating a demand for and taking from the lines all the gas that they can possibly use at those periods. That is what we term the peak load.

Q. What would you say the maximum variation would be between the demand for the peak load and the minimum load on the line?

A. About one to fifteen.

Q. That is, the peak load would be fifteen times as much——

A. It would be at least that.

Q. —as the minimum load?

A. In the summer time?

Q. Yes.

A. Yes, sir.

Q. I said the minimum load.

A. Yes.

Q. And what would you say would be the variation between the peak load, even in the winter time, as compared with the normal demand on the line?

A. That would vary. I would say from one to five—in that ratio. That is, even in the same periods of the day there is a fluctuation, you know; even on the coldest day in winter, there are periods during those twenty-four hours when the amount still increases.

Q. Well, explain that to us. What do you mean by that?

A. Well, people, when they are retiring at night, unless the weather is very severe—and some even at those periods—have reduced the amount of gas used for heating. Some people desire to sleep in a cold room, for instance—so that the requirements in the early part of the morning are not so heavy. As people arise in the morning, the house being cool—cold—they light grates and stoves, and increase the heat in their furnaces, so as to bring the home up to a comfortable temperature; right at that period, too, gas ranges are being used for cooking purposes, probably washing, and that creates a much larger demand and use of gas at those periods than in the earlier period which I mentioned here. At dinner time, times when people are doing their cooking, that of course creates a larger demand for the gas than at other times, over and above the heating load.

Q. Do the natural gas companies, in their practical operation,

endeavor to make any provision for taking care of this peak load upon their lines?

A. This company, through drilling, has always attempted, during the spring, summer and fall, to drill a sufficient number of wells to secure a sufficient amount of gas to carry the entire demand of its domestic consumers at all times. They have not been successful in doing that, in the past three or four years, at least.

Q. What is the cost—I will say the average cost—of drilling wells, including the building of rigs, casing, tubing and equipping for turning into the line?

A. That depends on what district. Taking our wells as a whole, it has run us an average of about $18,000, I believe—approximately—to drill the well, put it in shape to produce gas, connect the same into the gathering lines.

Q. At the present prices today, as compared with the average to which you have referred of some months ago, or a year ago, would you say $20,000 would be a fair average?

133 A. You mean at the present time?

Q. Yes. Or would it be too small? What would be the fair average today?

A. I say that $18,000, that I mentioned, is perhaps the average price for our wells drilled during the year 1919.

Q. I understood that. Well, what would it be, taking the conditions today, when, as I understand, everything is higher?

A. I wouldn't be surprised if it would reach $20,000.

Q. Today?

A. Today, yes, sir.

Q. That is, in 1920?

A. Yes, sir, at the present time.

Q. That is what I want, the present time.

A. I make that assertion for the reason—simply on the wages paid tool dressers—drillers; we have had to increase their wages three different times, a dollar a day each time.

Q. Within the last year? Has that been increased this year?

A. Yes, sir.

Q. Could you give us, in round numbers, the amount of the investment today of the Manufacturers Light & Heat Company in its wells—in its gas wells in West Virginia—in its gas territory in West Virginia, and in its transmission lines in West Virginia; I

134 mean, these as separate and distinct from its total investment in those items in all States?

A. No, I don't believe I could, Mr. Weil. I could secure the information. For taxing purposes, the property returned fo- taxing purposes——

Q. I know, you gave us that; that would be the whole property.

A. That would be about all I could state.

Q. I presume we can get that from the Accounting Department of your company?

A. Yes, sir, it would be guess work on my part.

Recess taken until 1:30 o'clock P. M.

Thursday Afternoon.

H. A. QUAY resumes stand.

Cross-examination.

Mr. Hoffheimer:

Q. Mr. Quay, you have given us some very interesting information here, and perhaps you can help us a little further in this matter. You have given some description of the conditions of gas production; did you, in referring to that, intend to cover merely the development and operation of the Manufacturers Light & Heat
135 Company, or to refer generally to the natural gas industry?

A. There were certain inquiries made of me which pertained to conditions existing in my own company; there were other questions, I believe, asked me which referred to the general conditions in the industry.

Q. Of course, I understood that when you referred to particular figures in the consumption, investment, and the location of pipe lines, compressor stations, and that sort of thing, that you were referring particularly to the Manufacturers Light & Heat Company.

A. Yes, sir; if those questions were asked me relative to my own company, yes.

Q. And when you referred to the natural conditions of gas production, you then were referring to general conditions and not those peculiar to the Manufacturers Light & Heat Company?

A. If I recollect correctly, there were questions asked me pertaining to the production of the Manufacturers Light & Heat Company. Those answers, of course, referred directly to the production of the Manufacturers Light & Heat Company. On the other hand, I believe I was asked questions which pertained to general conditions, and my answers to those, of course, pertained to the general conditions.

Q. Well, to get back to the beginning: It is true that, whether within or without the territory operated by the Manufacturers
136 Light & Heat Company, natural gas is found in certain gas-producing strata?

A. That is correct.

Q. That is true generally?

A. Yes, sir.

Q. That is true in Pennsylvania, it is true in Ohio, in West Virginia, Indiana, and other sections of the country with which you are familiar?

A. Yes, sir.

Q. And in all of that territory, and in the whole natural gas territory, as far as you know, the method of drilling wells is substantially the same?

A. No, I would say not.

Q. Where is the difference?

A. Well, take, for instance, Louisiana. Their manner of drilling

is rotary drilling, a different process entirely from the standard way of drilling—for instance—in this territory.

Q. But, after all, it gets back to an operation puncturing the earth, as you have stated?

A. It gets back to the point that a hole has to be developed or made in some manner, in the earth, so as to permit the production to come to the top of the surface.

Q. The territory with which we are particularly dealing—Pennsylvania, Ohio, West Virginia, and let us say Kentucky and
137 Indiana, is the area embraced in the Appalachian field, in a general sense—is that correct?

A. Yes, sir.

Q. The method throughout that field is pretty substantially the same, and has been?

A. Yes, sir.

Q. Since the inception of the development, so far as you know?

A. In a general way, yes, sir.

Q. How far back did you go in your history of gas development in Pennsylvania?

A. I think in the development, I believe that I stated my first experience with the natural gas industry,—I first became aware of natural gas—was about the year 1882 or '83.

Q. Was Pennsylvania the first State in the general territory I have indicated in which natural gas was discovered or utilized?

A. I wouldn't be prepared to state whether Pennsylvania was the first State in which natural gas was discovered. My recollection is that at Bradford, Pennsylvania, was the first large community that was piped and served with natural gas service. Various localities lay a little claim to that honor—for instance, East Liverpool, Ohio, a great many of the citizens of that town claim that the Encyclopedia Britannica states that natural gas was first used for industrial purposes in that town.

138 Q. Well, from the time that you have described, in Pennsylvania, of course, the development of natural gas and its utilization for domestic and industrial purposes was a matter of constant increase, was it not?

A. Constant.

Q. In Pennsylvania, I said.

A. Yes.

Q. And in the meantime, it is true that the development and production of gas for domestic and industrial purposes proceeded in other territories in this Appalachian field?

A. Yes, sir.

Q. Aside from Pennsylvania, what was the next State in which you recall that development and use to have occurred?—you don't need to get down to exact dates, or anything like that.

A. Ohio, and in West Virginia.

Q. How about Indiana?

A. The Indiana gas field is one that I am not very familiar with, only in a very general way. There was a great development, natural gas development, in Indiana which more or less became rapidly exhausted.

Q. In this way in which you have acquired a good deal of other general knowledge in regard to the gas business, you do know it to be true that at a comparatively early period in the industry there was a pretty extensive development in Indiana and then a decline in production there?

139 A. I will answer that question in this way: That at my home, in Meadville, Pennsylvania, we had natural gas, and that when natural gas was first introduced into the community there there were several glass factories located there; that in a period of two or three years, perhaps four years, due to conditions more or less of shortage in gas supply, I know that one of those factories left Meadville and located in Indiana. That, I would say, was about 1888—now, wait,—about 1890, or possibly '92,—that there was said to be large quantities of gas there at that time. Now, I do know that the town of Indianapolis, Indiana, was piped for natural gas, and that a little later there was not sufficient supply, and service there was discontinued. I will say that that was about the year '92, or '91, that gas was piped into Indianapolis,—I might be a little in error there, either way.

Q. Now, still proceeding a little farther west than Pennsylvania and West Virginia, there was a rather considerable history of gas development in Ohio, was there not?

A. There was, yes, sir.

Q. When did that development begin, approximately?

A. In Ohio?

Q. Yes.

A. I would say along, approximately 1885,—it might have been a couple of years earlier than that, there might have been

140 earlier operations than that.

Q. And that development, within the limits of the supply, has continued to the present time,—is that true?

A. I wouldn't want to say that all the territory which was developed—gas territory which was developed in Ohio, is still producing gas.

Q. I think you did refer to a tendency to depletion in Ohio, as well as the other two States with which we are immediately concerned.

A. Yes, sir.

Q. When did that tendency to depletion in Ohio first manifest itself?

A. That would depend a good deal on what district you refer to, or whether you refer to the State as a whole.

Q. Well, if you are able to do so, you may give it to us either as a whole or divide your answer.

A. In some localities, the supply diminished by gravity; in other districts, in a gradual decline. For instance, my company had a production in what was known as the Brilliant field, I believe there are one or two wells yet remaining and I believe they are being abandoned at this present time. My first work done for the Northwestern Natural Gas Company, which supplies Toledo, Maumee and Perrysburg, was about the year 1903 or '04; they had had an

abundance of gas in fields about south of Toledo. The City
141 of itself had installed a municipal plant. Two companies had been operating. The source of supply for the municipal plant became practically exhausted, and they ceased to operate the plant. The Northwestern had had an abundance of gas, but they were short at that time.——

Q. What date is that you are referring to?

A. That was about the year 1903 or 1904—now, I think I am within a couple of years of my exact time.

Q. I am not trying to bring you down to exact dates, I just want to get a little history.

A. Now, if you refer to the gas field designated as the Cleveland gas field, that was discovered in rather recent times, comparatively, and I am told—in fact, I have seen figures on it, which show that it has been rapidly depleted. If you refer to the gas field which was struck some five or six years ago opposite Wheeling, or Chester, north of Wheeling, known as the Warwood Pool, I will state that there were large quantities of gas taken from that and within a year's time it had been practically exhausted.

Q. Well, we will transfer our affections to the State of Pennsylvania. I suppose that that is true here in Pennsylvania, that in particular sections that tendency to depletion manifested itself pretty early, did it not?

A. It did, to a greater or less extent, yes.

Q. How early, would you say, that tendency appeared?

142 A. I would say on part of that territory that the tendency was marked enough to show that the gas was being depleted within a year or two after a considerable market had been developed by the company. I have in mind the company then known as the Oil City Fuel Supply Company, which supplied the town of Meadville, in which I resided. I stated in my direct testimony that the manner of burning the gas in those times was not by meter, but at a rate of so much per month per stove. I think I am absolutely correct when I stated that it was the second or third year that there was more or less shortage, which would naturally indicate depletion.

Q. So that the result was that, in that particular district, it became apparent that, if the volume of production was to be kept up, the operators would have to seek a little broader territory, was it not?

A. As the market increased, the demand increased for their gas, and as the available production from the wells which they had already drilled decreased, it was only natural that they desired to stay in the business, to seek new fields, additional supply—for, if they desired to extend their territory, take on new customers, it would be desirable to extend to new fields.

Q. You had two conditions to meet: First, that the wells already drilled were declining in production; and, second, that the use of gas was becoming more general, more customers were
143 being connected; and naturally an additional supply was needed?

A. That would be the condition at that time.

Q. And what you have said about that particular field has been

applicable pretty much to the development of the whole natural gas territory, hasn't it?

A. You refer to depletion?

Q. Yes.

A. I would say yes.

Q. In fact, that tendency and that experience have been part of the history of the natural gas business almost from the beginning—is that correct?

A. That is one of the peculiarities of the natural gas industry, that once natural gas is used, it is gone.

Q. Well, in Ohio and Pennsylvania, you had the conditions you have described; and I suppose that it is true that similar conditions developed in West Virginia, is it not?

A. You refer, of course, to depletion?

Q. Depletion.

A. The fields in West Virginia have been depleted, are being depleted.

Q. The conditions you have had to meet there have been practically the same as in Pennsylvania and Ohio?

A. Yes, sir, I would say the same, to a greater or less extent.

Q. The Manufacturers Light & Heat Company, with which
144 you are connected, has been in the natural gas business how long?

A. I would say that the Manufacturers Light & Heat Company has been in the natural gas business, I believe, since the year 1885, possibly 1884.

Q. The company to which you now refer is incorporated under the laws of what State?

A. Pennsylvania, I believe.

Q. And how long has that particular company been engaged in the production and transportation of gas in West Virginia?

A. That company, as the Manufacturers Light & Heat Company, I would say that it has been since the year 1902 or 1903—it might have been a little time prior to that—as the Manufacturers Light & Heat Company; that is, I mean by that, that in 1902 or '3 they secured by purchase or merger certain companies which were operating in West Virginia, and became the owner of them, at that time, either 1902 or '3.

Q. What were those companies?

A. They purchased the Tri-State Gas Company, the Wheeling Natural Gas Company, and the Fort Pitt Gas Company.

Q. Will you please tell us in what particular sections of West Virginia these companies were operating at the time they were taken over by the Pennsylvania company?

A. The Wheeling Natural Gas Company, I believe, was operating in what is known as the Cameron field, the Proctor field, and in the Hundred field, and Sedalia field. The Fort Pitt Gas
145 Company——

Q. Let me interrupt you: I think you pointed out here yesterday the Hundred field and the Sedalia field.

A. Yes.

Q. And what was the other field, with respect to the Wheeling Natural Gas?

A. Sedalia.

Q. The third one—the Proctor. Now, where is that Proctor field, with respect to the map you have in evidence.

A. (Referring to Pennsylvania Exhibit No. 1)—The Proctor field is located in Marshall County and part of Wetzel County, the northern part—is what we style our Proctor field.

Q. You are now referring to the territory in the vicinity of the town of Proctor, on the Ohio River, and running northerly up to or very close to the Rosbys Rock Compressing Station?

A. Yes, sir.

Q. Now the Fort Pitt?

A. The Fort Pitt Gas Company, I believe their operations were in Pennsylvania. The Tri-State operated down through the east Liverpool district, Steubenville district, taking in towns on both sides of the river, both States.

Q. The Wheeling Natural Gas Company was a West Virginia corporation, was it not?

A. I am unable to tell you definitely whether it was or not.

146 Q. And you are no more definitely informed as to the Fort Pitt or the Tri-State?

A. I believe the Fort Pitt was a Pennsylvania corporation.

Q. Was the Manufacturers Light & Heat Company a West Virginia corporation that preceded or was a subsidiary of the Manufacturers Light & Heat Company, a Pennsylvania company?

A. I don't know whether it was or not. It is not my recollection. If I understood you correctly, was there a Manufacturers Light & Heat Company of West Virginia?

Q. Yes.

A. There was not.

Q. Was there a Manufacturers Gas Company?

A. There was a Manufacturers Gas Company, yes, sir.

Q. Where did that come into the organization of the Pennsylvania company?

A. The Manufacturers Gas Company was a subsidiary company of the Wheeling Natural Gas Company, I believe, organized and delivered gas to industrial consumers in the city of Wheeling.

Q. Did it have any field of its own?

A. I believe not.

Q. Do the companies which you have named exhaust the list of those which became absorbed into the Manufacturers Light & Heat Company of Pennsylvania?

A. The companies which I have named are not the only

147 companies which went into the making of the Manufacturers Light & Heat Company as it stands today. They had other companies which from time to time, I believe they bought or merged.

Q. Perhaps you can tell us what they were.

A. There was the Canonsburg Light & Fuel Company, I believe it was called.——

Q. Will you tell us, as you go along, where they operated?

A. Located at Canonsburg, Pennsylvania; was the Blacksville Oil & Gas Company, located at Blacksville, West Virginia; there is —or was, and is yet—the New Cumberland Gas & Water Company, located at New Cumberland, West Virginia,—I say is yet, I believe the gas part of that is with the Manufacturers, the water perhaps separate, I am not quite sure whether that is kept separate or not, it is a separate company in New Cumberland; there was a company called the Ohio Valley Company—not the Ohio Valley which, I believe, the Tri-State purchased, but one in what is known as Sewickley, Pennsylvania; there was the Shenango Valley Company, which operated in and around what is known as the New Castle district, Pennsylvania. There might be a few others.

Q. When was it that the Manufacturers Light & Heat Company, the Pennsylvania corporation, took over the properties of the Wheeling Natural Gas Company, the Tri-State and the Fort Pitt companies?

148 A. As stated previously, if my recollection is correct, about the year 1902 or '3.

Q. Are you able to tell us about when the three companies you have indicated began their operations in the West Virginia field?

A. I stated yesterday, if I was correct, along 1888 or '89. I stated then I might be in error as to the exact time.

Q. As a matter of fact, did those three companies—the Wheeling Natural Gas Company, the Tri-State and the Fort Pitt—each originally engage in West Virginia, or, on the contrary, is it not a fact that those companies took over other companies entirely which had preceded them in the same fields?

A. As to that, I wouldn't know as to what companies they took over, particularly which might have been operating in West Virginia. I don't pretend, you know, to know the detailed history, only in a general way, of those I have mentioned.

Q. As I understand, you have to deal somewhat in general information.

A. Yes, sir.

Q. I don't want to pin you down to details.

A. Thank you, sir.

Q. Do those three companies which you have just mentioned still exist?

A. They do not.

149 Q. How about the New Cumberland Water & Gas Company?

A. It still exists.

Q. That supplies what territory?

A. New Cumberland, West Virginia.

Q. How about the Blacksville Gas Company?

A. To the best of my recollection, the Blacksville Oil & Gas Company does not exist.

Q. When did that Blacksville company go out of existence?

A. I think it has been about four years.

Q. Up to the time it went out of existence, what territory was it supplying?

A. It supplied a few customers located in the town and vicinity of Blacksville, West Virginia.

Q. What county is that?

A. It is in Monongalia County, right close to the State line dividing West Virginia and Pennsylvania.

Q. That was a West Virginia company?

A. I don't know for certain whether it was West Virginia incorporated or not.

Q. What territory did that Blacksville Company hold?

A. I think all they had was some pipe lines; there might have been one or two wells,—it was very small.

Q. At the time the Wheeling Company was absorbed, what territory did it hold—the Wheeling Natural Gas Company?

A. The Wheeling Natural Gas Company; I believe the Wheeling Natural Gas Company had territory in Pennsylvania and
150 also territory in West Virginia.

Q. Do you know what the extent of the territory was?

A. At that time they were operating in what is known as the Cameron field and in the Hundred field, West Virginia; I believe also in the Sedalia and Proctor fields.

Q. Are you able to give us the acreages in West Virginia operated or held by the Wheeling Natural Gas Company when taken over by the Manufacturers?

A. No, I would not be in position to tell you that; I haven't an idea of what their acreages were.

Q. Your records would show, would they not?

A. The records of old companies of that kind, more particularly when they have been purchased by another company, are ofttimes found to be incomplete. Certain records which should have been transferred, perhaps have not been. I don't mean to say that we could not furnish you that information, I don't know whether we can or not.

Q. I would be glad, when we next resume, if you are able to do so, if you would tell us what territory and what number of wells these several companies operating in West Virginia, which you have mentioned, had at the time they were acquired or taken over by the Manufacturers Light & Heat Company; and also what territory each of them was serving.

A. You mean, in both States, or simply in the State of
151 West Virginia?

Q. West Virginia.

A. I will make my best endeavors to supply or have the information.

Q. Prior to the period of actually taking over the properties of these several companies which you have mentioned, were the companies independently operated, or operated as subsidiaries of some other company—holding company?

A. You mean, at the time the Manufacturers Light & Heat Company acquired them?

Q. During the time preceding that.

A. I think they were unquestionably operated independently of the Manufacturers.

Q. That is, the Wheeling Natural Gas Company was operated as an independent company?

A. I believe so.

Q. The same with the Blacksville, the New Cumberland, the Tri-State and the Fort Pitt?

A. I believe so.

Q. You gave us quite a history of the utilization of natural gas in Pennsylvania, and the adaptation of dwelling houses and industries to the consumption and use of gas. Was that true exclusively of Pennsylvania, or did similar situations spring into existence elsewhere?

152 A. I would say, as a general proposition, that the same conditions exist in the States of Ohio and West Virginia.

Q. In other words, the people of West Virginia in the territories accessible to natural gas supplies built their houses, places of business and public institutions with respect to the consumption of natural gas, and fitted them out with appliances for such consumption,—is that true?

A. I wouldn't care to state that all of the consumers in West Virginia did that; neither that all the consumers in Pennsylvania or Ohio did that. There are, I stated, many instances in Ohio and Pennsylvania that people built with the thought entirely of using natural gas, and I would say that the same system no doubt prevailed in West Virginia.

Q. Perhaps we are not driving at exactly the same thing. I was not referring particularly to any exclusive construction, but to the fact that in the territory in West Virginia with which you are familiar, that at an early date, co-incident with the development of the natural gas companies, the people did build or arrange their houses with a view to the consumption of natural gas as fuel, both for heating and lighting purposes?

A. I haven't any doubt that some of the houses constructed were constructed with that idea in mind. I wouldn't say that all

153 of the houses constructed were constructed with that idea in mind, because I know better.

Q. Well, let us put it this way then: The people did equip their houses with appliances for burning natural gas, both for heating and lighting, in West Virginia?

A. That is true.

Q. In very many instances with which you are personally familiar, from your wide experience, people, in building their houses, installed open fire places with an equipment for burning natural gas for heating?

A. Yes, sir.

Q. In very many instances with which you are familiar, they

piped their houses for the purpose of burning gas for light as well as heat?

A. Correct.

Q. It is true that the people of West Virginia so far as you have observed them, have also installed—and did at a very early date install—cook stoves and ranges constructed for the consumption of natural gas?

A. Yes, sir.

Q. From what you know, a great many different districts and areas in that state have, for twenty-five or thirty years past, burned natural gas almost exclusively for domestic fuel?

A. I wouldn't want to make that statement. I would say that there are some districts that use a great deal of gas in their homes for the purpose of heating, cooking, and lighting their homes;

154 that we serve other districts in West Virginia, places like Wellsburg, in which a great many of the inhabitants do use natural gas for cooking, heating and lighting, but there are many others who do not use gas exclusively for heat. The districts I refer to would be such as Chester, and Newell, New Cumberland, on down to Moundsville.

Q. You told us this morning, in a general way, the cost of converting conditions in Pennsylvania dwelling houses so as to use a fuel other than natural gas, in case of shortage or deprivation. Have you any reason to revise your figures as to cost, if a respectable householder in West Virginia should find it necessary to re-convert his appliances to put in a coal cook stove, or electric light wiring, or a central heating plant for the consumption of coal?

A. I would say that I see no reason particularly why I should. My figures this morning were an estimate which covered what I believe to be the average cost to consumers.

Q. Whether in Pennsylvania or West Virginia?

A. Yes. I referred in my testimony this morning to Pennsylvania and Ohio.

Q. In your operations in West Virginia, you necessarily have some idea as to costs of material and construction?

A. I have. Of course, there would enter into an estimate, you know, the general size and character of the houses which you serve.

155 Q. You have houses of all classes and types in Pennsylvania and also in West Virginia.

A. All types and sizes, both in Pennsylvania and in West Virginia, perhaps in an equal number.

Q. Now, with regard to the use of natural gas for industrial purposes, of course you have had a greater range and variety of industries in Pennsylvania than West Virginia; but it is true that the general character of the use of natural gas for industrial purposes in Pennsylvania and in West Virginia has been very much the same?

A. I would not want to state that the uses of gas in Pennsylvania were much larger; that varies, you know, in the character of the industries we serve,—there is some, of course. Conditions would be about the same in both states relative to the character of the com-

panies and the product which they manufacture, or the purpose for which they use the gas.

Q. How long have you known natural gas to be used as fuel for industrial purposes in West Virginia?

A. For some years. I would say twenty or twenty-five years, of my own knowledge.

Q. When the Manufacturers Light & Heat Company, in 1902 or 1903, or whatever the date was, engaged in business in West Virginia, it found gas being used industrially?

A. Yes, sir.

Q. Was the Wheeling Natural Gas Company at that time
156 furnishing any gas for industrial purposes?

A. Prior to the time of its sale to the Manufacturers?

Q. Yes.

A. I believe so.

Q. What plants were being supplied—what individuals and what territory?

A. You mean, at that time?

Q. At the time the Manufacturers took over the company.

A. Took over the plant.—They were, I believe, supplying the Wheeling Steel & Iron Company, Wheeling, West Virginia; the Northwood Glass factory, Wheeling, West Virginia; the Whittaker & Glesner plant, Wheeling, West Virginia; the La Belle Iron Works. Those, I believe, are the largest.

Q. And in regard to such concerns as Follansbee Brothers and the Weirton Steel Company and some others you named, those were brought on the list of gas consumers for manufacturing purposes after the Manufacturers Light & Heat Company itself engaged in business in West Virginia?

A. No, I would not want to say that. I believe Follansbee Brothers, located at Follansbee, West Virginia, probably came on as a consumer of the lines perhaps of the Tri-State Gas Company; and I believe that the Weirton steel plant, located at Weirton, West Virginia—the Weirton Tin Plate, rather, located at Weirton, West Virginia, came on as a consumer of the Tri-State Gas Company.

157 Q. At the present time the Manufacturers Light & Heat Company is supplying what cities and towns in West Virginia?

A. At the present time the Manufacturers Light & Heat Company is supplying gas into the town of Chester.

Q. How long has that been? I don't want the exact date, but approximately.

A. I would say, roughly, perhaps twenty or twenty-five years, perhaps longer—that is, in that locality, and perhaps not only in the town of Chester; I think Newell was a town that developed on account of the location there of the Laughlin China Company, I think that is what made the town of Newell.—I may be wrong about that. They supply gas in the towns of Chester, Newell, New Cumberland, Wellsburg, Warwood, McMechen, Moundsville, the little town of Glendale, Brooklyn, New Martinsville. Those are the principal towns; we also supply gas to Middlebourne.

Q. Aside from those cities and towns which you have just enu-

merated, there is considerable rural population in between, which the company supplies?

A. We no doubt supply rural consumers—that is, consumers along our lines. I presume you refer to towns like Cameron and those places; we don't supply the bulk of them, we might have a few consumers in places like Cameron, Hundred, and so forth.

158 Q. As a matter of fact, between the incorporated cities which you have mentioned, your gas supply is pretty much confined to villages or centers of population of various sizes in between, rather than a farm country?

A. No, I would not want to say that we don't have consumers along the main lines of the company, because I know we do serve customers along our main lines.

Q. From the nature of those cities which you have mentioned, your company has a full array of gas mains in the public street, and I suppose service lines running into the houses in the ordinary manner of gas distribution?

A. Yes, sir.

Q. And I suppose, from the nature of these cities in West Virginia, you are operating under municipal franchises giving you rights to be there?

A. I really would not want to say whether we are operating in all the towns in West Virginia under a franchise.

Q. Perhaps you can remember a few where you are quite certain.

A. Well, I believe I am correct when I state, for instance, the town of Follansbee; I don't believe that we are in there franchised. My recollection is that the major portion of our lines were laid prior to the time it was incorporated, or known as a city or town. I, without looking it up, would hesitate to tell you, with any degree of accuracy, as to whether we have franchises or ordinances

159 in the other towns or not. We serve, I might say hundreds of communities. I know I did at one time attempt to gain that knowledge, and there were so many of them I had to give it up. So I am not prepared to state which towns in West Virginia we have an ordinance, or whether we have one, or—in fact, we discovered instances where we thought we had one and we didn't have.

Q. Take the situation in Follansbee, as you think it to be,—Where you went into the business of gas supplying, and the town incorporated around you; up to the time that town sprang into existence, what afterwards became public streets were public highways of the County, were they not?

A. Of the town and County.

Q. And you had some permission, or something in the way of permission from the County Court, in that instance?

A. I would be unable to state. I think, though, there was.

Q. Then the fact remains that, while you are uncertain as to the places at which you have or have not municipal franchises in West Virginia, you are operating, and have been operating for a number of years in the past, under some sort of municipal——

A. Power.

Q. Permission or power or tolerance or acquiescence—is that correct?

A. That is correct.

160 Q. How about the town of New Martinsville, do you recall whether you have a franchise there?

A. I couldn't tell you.

Q. At the time the Manufacturers Light & Heat Company took over the Wheeling Natural Gas Company and the other companies which you have mentioned, the Manufacturers Company acquired whatever rights the Wheeling Company and the other lesser companies had?

A. I would be unable to answer that question, I don't know. I know that there have been some purchases made by the company in which they did not take over the franchise rights, they simply purchased the physical property of the company.

Q. What company was that?

A. The competing company in the town of Middlebourne, for instance.

Q. That is in Tyler County?

A. Yes. There they purchased the physical property. Take the Newell Gas Company, which was in Hancock County there at Newell and Chester, that company was acquired by purchasing just the physical property.

Q. When was that purchase made, by the way?

A. That, I would say, roughly, has been about six or seven years ago, for the Newell Gas Company; the purchase of the company I mentioned at Middlebourne, I would say, two years ago, or two years and a half ago—now wait, I have that wrong, probably a year

161 or a year and a half,—about a year, I would say.

Q. What territory did they have?

A. The company mentioned at Middlebourne had to supply a portion of the consumers, domestic—and I believe a little industrial business—down in Middlebourne. It purchased and secured its gas in that vicinity. The Newell Gas Company had some industrial business, I believe, over at Newell, Chester, and also in the city of East Liverpool, Ohio, directly across the river from Newell and Chester. I might state that I made an answer to you that I didn't know whether or not we were operating in the town of New Martinsville under an ordinance or a franchise. I want to correct that, because it has flashed into my mind that there is some provision of some free gas there which they receive under a clause in an ordinance. Now, if my recollection is correct, we would have the ordinance in New Martinsville, West Virginia.

Q. Now, with regard to the system of pipe lines you have mentioned, the extent of the system which you have pointed out is as of what date—the present?

A. My instructions to the engineering department were to bring the map up to date, anything that might have been laid or extended the past couple of months,—it was brought up to date, I think,

162 several months ago,—it was supposed to be up to date as of this week, or the past week.

Q. When did the construction of that system of pipe lines of the Manufacturers' Light & Heat Company commence in West Virginia?

A. That I would be unable to state, only in a general way. I presume you refer to their main lines, or the system as a whole?

Q. Well, let us say the system as a whole.

A. I wouldn't know.

Q. Suppose you take the larger main lines, trunk lines.

A. The 16-inch and 20-inch line, which the 12-inch discharge line from Hundred station enters, and also the discharge line from the Sedalia station enters, and passes through Marshall County, West Virginia, crossing the State line dividing the States of West Virginia and Pennsylvania, in a northeasterly direction,—the construction of that line was begun and completed in the year 1903-1904, I believe.

Q. Was that construction by the Manufacturers Light & Heat Company, or by the Wheeling Natural Gas Company, or the other acquired companies you have named?

A. That line was constructed, I believe, by the Manufacturers' Light & Heat Company.

Q. Before those particular lines were constructed, in 1902
163 or 1903, what was there in the way of a pipe line system?

A. There might have been, and were, I believe, these various companies which they purchased, but were not connected; I believe that after the—immediately after the purchase, one or two of those companies were connected in some manner with smaller connecting lines.

Q. The fact about it is that each of these smaller companies, from their very inception, had to construct field lines from their wells, and main lines of at least modest proportions, in order to supply the particular communities which they were serving—is that correct?

A. That is correct?

Q. And naturally, when the business assumed larger proportions, the pre-existing lines, which had been built by the smaller companies, were availed of so as to form parts of the larger system?

A. The plants purchased were tied together in a manner so as to make one whole general system.

Q. What pipe line, if any, did the Wheeling Natural Gas Company have in their Sedalia field at the time of acquisition by the Manufacturers Light & Heat Company?

A. I would be unable to answer that question, because of my unfamiliarity with it; the fact is, I never made any particular inquiries
as to sizes of their lines, or how they were connected or
164 how laid.

Q. Well, you know, as a matter of the history of your company, that the construction of a pipe line in the territory around Sedalia was undertaken by the Wheeling Natural Gas Company many years ago?

A. To the best of my recollection, in going over the history of the company, the Wheeling Company did operate in the Sedalia field.

Q. And gas from that field was transported by lines of the Wheel-

ing Company to New Martinsville, and the Ohio River towns up to Wellsburg?

A. The company which supplied New Martinsville was called the Wetzel Natural Gas Company, I believe.

Q. I believe you are right about that.

A. Now, the Wetzel Company probably was a subsidiary company of one of the others which were purchased.

Q. So that, in the final absorption, the Wetzel Natural Gas Company was also taken over by the Manufacturers Company?

A. Yes, the Manufacturers Company owns, or did own, the Wetzel Gas Company; it is out of existence now.

Q. But to go back to my question: Whether it was the Wetzel Gas Company or the Wheeling Natural Gas Company at New Martinsville, it is true that the gas from the Sedalia field was being transported by a line of the Wheeling Natural Gas Company to
165 New Martinsville and that Ohio River territory up to Wellsburg?

A. Either the Wheeling Natural or the Tri-State, either one of those two companies. When you refer to Wellsburg, that, I believe, was Tri-State—Wellsburg, the town of Wellsburg, that was served by the Tri-State Company.

Q. What would you say was the main line mileage of the Manufacturers Light & Heat Company pipe line system in West Virginia?

A. I wouldn't know. I can give you the total mileage of the company, the total mileage of their pipe line system, pipe 2 inches or larger in size, if that would be of any value to you,—approximately 2,900 miles.

Q. How much?

A. 2,900 miles.

Q. That is, West Virginia alone?

A. No; that is our total system, as stated—the entire system.

Q. Now, your main lines in West Virginia are built on rights of way acquired in some manner?

A. Yes, sir. On that I want to say that we have a right of way for every foot of ground covered by pipe lines—stating in a very general way, all the pipe lines which we laid, rights of way were obtained by the company.

Q. Well, without questioning your title in any particular instance, those rights of way were acquired how?

A. Some, I presume, by paying for them—in fact, I know
166 so; some by agreement in which the company made a special rate for the gas consumed by the owner of the lands over which the pipe line crosses.

Q. In either event, you had an agreement or deed of grant from the land owner?

A. I would say in practically all instances there is some written instrument which gives us the right to lay our lines. I want to impress as I did state, every foot of our line is covered by a right of way.

Q. How much of your mileage did you acquire by condemnation?

A. Of my own knowledge, I don't know of any that was acquired by condemnation. I want to say by that now that there might have been some acquired in that manner, but I know of none personally.

Q. Are you referring now particularly to the Manufacturers' Light & Heat Company or to the Wheeling Natural Gas Company and other lesser companies?

A. I considered your question to mean any of the lines now owned by the company, no matter who owned them formerly.

Q. Do those pipe lines traverse any land other than that acquired by private grant or agreement—waiving any minor questions of title?

A. I would say that perhaps they do. Some of the lines run along the highways and roads in the State.

Q. In a general way, what lines are those?

A. Oh, I don't refer to any particular line, only that, driv-
167 ing through the State, "this is our line" or "that is our line," and I see it laying beside the road. Take, for instance, down below Wellsburg, we have lines that are run on a portion of the highway. We have lines at Wheeling that are supposed to be on the National Turnpike, and so forth. We have, no doubt, hundreds of places where we cross the roads, one farm to another.

Q. I was going to suggest that in a vast number of instances you necessarily have to cross the public roads.

A. That condition would exist, yes, sir.

Q. And in a less number of instances, any pipe line system of the size of the Manufacturers Company in West Virginia would have to pass for some distance, in various places, along public roads or highways?

A. Along and across public highways, yes.

Q. Are you able to tell us where your company secured those rights of crossing and running along public roads or highways, so far as you can do so?

A. The custom in West Virginia, I believe, is to apply to what is known as the County Court.

Q. You have from them franchises or permits in the nature of franchises?

A. Yes, permits, which permits are to move our line or lay a new one. For instance, on the bridge connecting the towns of New Martinsville and Brooklyn, we desired to lay a line there on the bridge; it was necessary to go to the County Court and secure
168 a permit before it could be laid.

Q. You undertook to give us at the outset the amounts of gas produced or ocquired by purchase in Pennsylvania, West Virginia and Ohio, and the amounts supplied to your customers. That was as of the year 1919?

A. That was of the year 1919, and the figures quoted were approximate figures, very near accurate as to the amount.

Q. When we resume, if you do not now have the figures, I wish that you would have available the figures of natural gas production and purchase in the three States, beginning with the year 1910,

year by year, up to and including 1919—revising your figures for 1919, if you deem it necessary to do so.

A. I will give you the figures.

Q. I would be glad also if you would give us the gas acreages of your company, year by year, during the same period, both operated and unoperated; the number of wells, year by year, covering the same period. I think my previous request did cover, but I want it to cover the classes of consumption by your consumers, as divided into domestic and industrial and——

A. Miscellaneous.

Q. If your records show miscellaneous, or public institutitions, let that be covered.

A. I will do so.

169 Q. Will your miscellaneous consumption, or what you term that, cover consumption in the field for drilling?

A. Yes.

Q. If you are able to separate that from the other items of Miscellaneous, I would be glad to have you do so.

A. You want the total amount of gas used simply for drilling operations, or to include, if possible for us to ascertain, the amount of gas sold for all field purposes?

Q. Let us say field operations, yes.

A. Yes.

Q. And include pump station operations also.

A. Miscellaneous includes compressing stations. Do I understand you want those separate from the other items?

Q. No, I think not to separate compressing stations from your other operations, but include that item in the total of operating fuel.

Mr. Weil: That would be included in field operations?

Mr. Hoffheimer: Yes.

Mr. Hoffheimer:

Q. If your records will give us your pipe line mileage year by year, we will be glad to have that also—beginning with 1910, let us say.

A. You mean the total mileage in——

170 Q. In West Virginia.

A. Do you want the field separated from the city plants?

Q. Let me see—what is your minimum line, 4 inch?

A. Two, we class it 2 inches or larger.

Q. Let us begin with that, then, without getting out in the smaller field lines—that is, start at 2.

A. I will do so.

Hearing adjourned, it being agreed by counsel for the complainants and defendant respectively that said hearing shall be resumed on the 31st day of May, 1920, at 11.00 o'clock a. m., at the offices of The Peoples Natural Gas Company, Pittsburgh, Pennsylvania; all other notices thereof being waived.

ORIGINAL, #23 & #24.

October Term, 1919.

THE COMMONWEALTH OF PENNSYLVANIA

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO

vs.

THE STATE OF WEST VIRGINIA.

Proceedings of May 31st–June 3d, 1920.

171 Monday, May 31st, 1920.

And now Monday, May 31st, the hour of 11:00 o'clock A. M. having arrived, parties met pursuant to adjournment.

Present: The Commissioner, Levi Cooke, Esq.; for the Commonwealth of Pennsylvania and State of Ohio, A. Leo Weil, Esq.; for the State of West Virginia, Attorney General Edward T. England, Philip R. Steptoe, Esq., George M. Hoffheimer, Esq., and W. S. John, Esq.

H. A. QUAY recalled.

Mr. Weil: Before we proceed, you asked us to obtain for you certain data and information at this hearing. First, the number of wells the several companies had in West Virginia when they were acquired.

Mr. Weil:

Q. Have you been able to obtain that, Mr. Quay?

A. We have been unable to secure that information. I do not know, in the first place, whether it is possible for us to secure the same, but, if it is, it would mean a research through many books

and records of the company. I can supply that data since
172 1910 or 1911; that was also asked.

Q. Now, you were also asked to obtain, if possible, the territory that these respective companies were serving at the time they were taken over, these companies that were taken into the Manufacturers Light & Heat Company. Have you been able to obtain that?

A. The acreage which those companies had, I have been unable to secure the same.

Q. No, I am not speaking of acreage now. I am speaking about the territory that was served by these companies at the time they were taken over.

A. They refer to the communities served?

Q. Yes.

A. I believe I could answer that fairly well.

Q. Well, suppose you give us that then.

A. The Wheeling Natural Gas Company,—the principal points of consumption: In the city of Wheeling, the city of Bellaire, Bridgeport and Martins Ferry; later, Moundsville, West Virginia. The Wetzel Natural Gas Company supplied the town of New Martinsville, and also the town of Brooklyn, and to smaller communities and isolated communities along their main line. The Tri-State Gas Company supplied a portion of East Liverpool, Ohio; a portion of Wellsville, Ohio; Toronto, Ohio; New Cumberland, West Virginia;
Steubenville, Ohio, and Wellsburg, West Virginia. The Fort
173 Pitt Company supplied up towards New Castle, Pennsylvania, and towns in the Beaver Valley, such as a portion of New Brighton, Beaver Falls, Beaver, Rochester; also at one time supplied a portion of consumers through Bellevue and Avalon.

Q. Now, you did not give us the territory in Pennsylvania that was supplied by the Tri-State. Can you recall that now,—what it was?

A. The Tri-State supplied in Pennsylvania—the principal towns were McDonald and Midway; part of Pittsburgh, some of the boroughs in and about Pittsburgh, a portion of them.

Q. Now, then, you were asked to have prepared the figures with reference to the natural gas production and purchases in the three States for the years from 1910 to 1920. Did you have that statement prepared?

A. As far as our record——

Q. Now, before we get to those figures, Mr. Quay, I want to refresh your recollection as to some of these other gas companies and the territory they were serving. I call your attention to the following companies: The Ohio Valley, the New Cumberland Water & Gas, the Franklin and Washington Gas Company, the Peoples Light & Heat, and the Bellevue and Glenfield Gas Companies. Were those all taken in by the various constituents of the Manufacturers Light & Heat?

A. Yes, sir.

Q. What did the Ohio Valley supply?

174 A. They supplied gas to consumers in the city of East Liverpool, Ohio; Newell and Chester, West Virginia.

Q. And the New Cumberland Water & Gas Company?

A. Supplied gas and water to customers at New Cumberland, West Virginia.

Q. And the Franklin and Washington Gas Company?

A. Supplied a portion of the city of Washington, Pennsylvania; West Washington, Pennsylvania, also.

Q. And the Peoples Light & Heat Company?

A. The Peoples Light & Heat supplied a portion of the customers at Washington, Pennsylvania.

Q. And the Bellevue and Glenfield Gas Company?

A. They supplied gas through Bellevue, or a portion of Bellevue, Avalon, Sewickley, and smaller towns adjoining.

Q. I think you stated all of those companies were absorbed or merged into one or the other of the companies that finally became the property of the Manufacturers Light & Heat?

A. They are now the property of the Manufacturers Light & Heat Company.

Q. Now then, those figures that I asked for, have you them?

A. There is the gas purchased since the year 1910. (Producing paper.)

Q. Will you give us the number of thousand cubic feet purchased in Pennsylvania, West Virginia and Ohio, and the total amount purchased in the three States, from 1910 to 1919, inclusive?

175 A. There was purchased in the State of Pennsylvania, in the year 1910, 1,333,105,000 cubic feet; in the State of West Virginia, in the year 1910, there were purchased 17,411,392,000 cubic feet; in the State of Ohio, in the year 1910, there was purchased 155,573,000 cubic feet. Making a total of 18,900,070,000 cubic feet, purchased in the year 1910.

Q. Now, instead of putting that "in the year 1910," just say, first, "in the year 1910," and then say "in the same year."

A. In the year 1911 there was purchased in the State of Pennsylvania, 842,071,000 cubic feet. In the same year there was purchased in West Virginia 14,066,735,000 cubic feet. In the same year there was purchased in Ohio 307,969,000. A total of 15,156,775,000 cubic feet. In the year 1912, there was purchased in the State of Pennsylvania 3,041,975,000. In the State of West Virginia, the same year, 11,731,635,000. In the same year, in the State of Ohio, 159,385,000. Or a total of 14,932,995,000 cubic feet.

In the year 1913 there was purchased in the State of Pennsylvania 3,460,463,000. In the State of West Virginia, the same year, 12,004,454,000. In the State of Ohio, same year, 149,789,000. A total of 15,614,706,000 cubic feet.

176 In the year 1914 there was purchased in the State of Pennsylvania 4,589,031,000. In the State of West Virginia, for the same year, 11,378,840,000. In the State of Ohio, same year, 23,868,000. A total of 15,991,739,000 cubic feet.

There was purchased in the State of Pennsylvania in the year 1915, 3,384,340,000. In the State of West Virginia, for the same

year, 11,004,955,000. In the State of Ohio, in the same year, 51,548,000. Or a total of 14,440,843,000 cubic feet.

There was purchased in the State of Pennsylvania in 1916, 2,715,733,000. In the State of West Virginia, the same year, 15,578,481,000. In the State of Ohio, the same year 72,738,000. A total of 18,366,952,000 cubic feet.

In the year 1917, in Pennsylvania, 2,157,715,000. In the State of West Virginia, same year, 15,523,979,000. In the State of Ohio, in the same year, 72,538,000. A total of 17,754,232,000 cubic feet.

In the year 1918, in Pennsylvania, 1,339,358,000. In the State of West Virginia, same year, 13,371,073,000. In the State of Ohio, same year, 57,360,000. A total of 14,767,791,000 cubic feet.

In the year 1919, Pennsylvania, 971,010,000. In the State of West Virginia, the same year, 13,589,149,000. In the State
177 of Ohio, 72,867,000. Or a total of 14,633,026,000 cubic feet.

Q. Now, have you, for the same period, your gas production in the three States?

A. The Company has no way of determining their gas production. That is, we have no meter installations which would tell us the amount of the gas produced in the separate States. We can, from an estimate prepared since the year 1916, apportion our gas production.

Q. How do you make that estimate?

A. That estimate is based on pressures taken at the wells each month. They take the first minute raise in pressure above line pressure. Knowing the depth of the well and the tubing and casing, in that manner, arrive at the gas that well will produce under those conditions at the time at which the test was made. We take our total sales, minus the gas purchased, which would indicate our own—or, gas sold from our own production. We take through percentage the gas—by using percentage—taking into consideration the amount of the gas produced in each field, and by applying those percentages, arrive as to the amount of gas each field produces.

Q. Is that method which you have described one in common use by the trade?

A. Yes, sir, the method which we have used has been a
178 method which has been accepted, I believe, by the West Virginia Public Service Commission in making reports as to our gas production.

Q. Well, it is one in general use by the trade, is it not?

A. For determining the amount of gas, yes, sir.

Q. Well now, you say you can give that from the year 1916?

A. Yes, sir.

Q. Suppose you give it to us then.

A. The figures show that in the year 1916 there was 10,770,472,000 cubic feet of gas produced from our own wells in the State of Pennsylvania. In the same year they showed that our own wells produced, in the State of West Virginia, 7,757,486,000. In the State of Ohio, for the same year, 57,105,000 cubic feet.

In the year 1917, in Pennsylvania, 9,308,935,000. In the State

of West Virginia, for the same year, 7,279,565,000 cubic feet. In the State of Ohio, 67,215,000.

In the year 1918, in the State of Pennsylvania, 8,291,800,000. In the State of West Virginia, for the same year, 6,431,445,000. In the State of Ohio, the same year, 26,524,000.

In the year 1919, in the State of Pennsylvania, 6,766,712,000. In the State of West Virginia, for the same year, 5,796,232,000. In the State of Ohio, for the same year, 27,812,000.

179 Q. You were asked to produce at this hearing, if you could obtain the same from your books and records, the gas acreage, year by year, from 1910 to 1920, separating the operated from the unoperated acreage. Can you give us that?

A. I can give you that in that manner since the year 1913.

Q. All right. You can not give it prior to that time?

A. I cannot, without a great deal of work on the part of the Accounting Department. They state to me that to secure the information in that form would require the going over of hundreds of thousands of leases, and picking out from their records, in that manner, their acreage.

Q. I suppose, since 1913, you have kept what you would call a real estate record——

A. A general record, I believe, which shows it, combined.

Q. That is, since 1913?

A. Yes, sir.

Q. Very well. Give us the figures from that date.

A. In the year 1913, in the State of Pennsylvania,—is it necessary to give fractional parts of acres?

Q. No.

A. In the year 1913——

Q. We don't care for the fractional parts of an acre. We will let that go.

A. In the year 1913, in the State of Pennsylvania, the com-
180 pany had 62,233 acres operated territory, and 132,339 acres of unoperated territory. In the State of West Virginia, for the same year, we had 33,918 acres of operated territory and 60,704 acres of unoperated territory. In the State of Ohio, for the same year, we had 3,260 acres of operated territory and 6,699 acres of unoperated territory. Do you want the totals in each year?

Q. Yes.

A. Or a total of 99,411 acres of operated territory in all States, and 199,743 acres of unoperated acreage, in the year 1913.

In the year 1914, we had in the State of Pennsylvania, 65,734 acres of operated territory, and 105,406 acres of unoperated territory. In the State of West Virginia, for the same year, we had 35,627 acres of operated territory, and 59,800 acres of unoperated acreage. In the same year, in the State of Ohio, we had 3,291 acres of operated territory, and 7,031 acres of unoperated territory. A total of 104,652 acres of operated territory, and 172,238 acres of unoperated territory.

In the year 1915, we had in the State of Pennsylvania, 65,224 acres of operated territory, and 104,359 acres of unoperated territory.

In the State of West Virginia, for the same year, we had
181 32,023 acres of operated territory, and 66,158 acres of unoperated territory. In the same year, in the State of Ohio, we had 1,644 acres of operated territory, and 22,,934 acres of unoperated territory. In the year 1915, in the State of Kentucky, we had 4,297 acres of unoperated territory. A total of 98,892 acres of operated territory, and 197,749 acres of unoperated.

In the year 1916, we had, in the State of Pennsylvania, 67,805 acres of operated territory, and 112,591 acres of unoperated. In the same year, in the State of West Virginia, we had 34,708 acres of operated territory, and 76,595 acres unoperated. In the same year, in the State of Ohio, we had 2,187 acres of operated territory, and 22,447 acres of unoperated territory. In the same year, in Kentucky, we had 5,547 acres of unoperated territory.

In the year 1917, we had, in the State of Pennsylvania, 76,011 acres——

Q. Read the total before there.

A. A total acreage, in 1916, of 104,700 acres operated territory, and 217,180 unoperated.

In the year 1917, we had, in the State of Pennsylvania, 76,011 acres of operated territory, and 115,005 acres unoperated. In the same year, in the State of West Virginia, we had 41,525 acres of operated territory, and 76,109 acres unoperated. In the same
182 year, in the State of Ohio, we had 1,998 acres of operated territory, and 18,825 acres unoperated. In the State of Kentucky, the same year, we had 5,622 acres unoperated territory. Making a total of 119,535 acres operated territory, and 215,562 acres unoperated.

In the year 1918, we had in the State of Pennsylvania, 79,634 acres operated territory, and 122,122 acres unoperated. In the State of West Virginia, for the same year, we had 45,268 acres of operated territory, and 73,304 acres unoperated. In the State of Ohio, for the same year, we had 1,635 acres operated territory, and 18,715 acres unoperated. In the State of Kentucky, we had 9,958 acres unoperated. In the State of Kansas, the same year, we had 844 acres unoperated. In the State of Texas we had 9,772 acres unoperated. Making a total of 126,538 acres operated, and 234,713 acres unoperated.

In the year 1919, we had in Pennsylvania 82,807 acres operated territory, and 103,221 acres unoperated. In the State of West Virginia, the same year, we had 48,155 acres operated, and 94,280 acres unoperated. In the State of Ohio, the same year, we had 1,066 acres operated, and 17,961 acres unoperated. In the State of Kentucky, the same year, 9,958 acres unoperated. In the State of
183 Louisiana, 4,073 acres unoperated. In the State of Arkansas, 40 acres unoperated. In the State of Kansas, 280 acres unoperated. In the State of Texas, 10,567 acres unoperated. Making a total of 132,028 acres operated, and 240,382 acres unoperated.

Q. You were asked to give us, during the same period, the number of wells in each of the States. Are you prepared to do that now?

A. I can furnish you a record of the wells since the year 1910, by States.

Q. Very well, give that to us.

A. In the year 1910, or rather, at the close of the year 1910, the Company had in the State of Pennsylvania 682 wells. In the same year, in the State of Ohio, 43 wells. The same year, State of West Virginia, 278 wells. In the year 1911, we had 652——

Q. Wait a minute. Give us the total of each year.

A. A total of 1,003 in the year 1910. In the year 1911 we had in the State of Pennsylvania 652 wells. The same year, in the State of Ohio, 29. The same year, State of West Virginia, 270; or a total of 951.

In the year 1912, we had in the State of Pennsylvania, 639 wells; in Ohio, 25; in West Virginia, the same year, 267; making a total of 931.

In the year 1913, we had in the State of Pennsylvania,
184 656 wells; the same year, in Ohio, 20 wells; the same year, in West Virginia, 289 wells. Total, 965 wells.

In the year 1914, we had in the State of Pennsylvania, 672 wells; in Ohio, the same year, 21 wells; in West Virginia, the same year, 313 wells. A total of 1,006 wells.

In the year 1915, we had in the State of Pennsylvania, 666 wells; in Ohio, the same year, 15; in West Virginia, the same year, 324. A total of 1,005.

In the year 1916, we had in the State of Pennsylvania, 692 wells; in the State of Ohio, the same year, 18; in the State of West Virginia, the same year, 363. A total of 1,073.

In the year 1917, we had in the State of Pennsylvania, 722 wells; in Ohio, the same year, 18; West Virginia, the same year, 389. Total 1,129.

In the year 1918, we had in the State of Pennsylvania, 748 wells; in the same year, in Ohio, 14 wells; the same year, in West Virginia, 437 wells. A total of 1,199.

We had in the year 1919 in the State of Pennsylvania, 764 wells; in the State of Ohio, 10 wells; and in the State of West Virginia, the same year, 461 wells; making a total of 1,235 wells as of December 31st, 1919.

Q. You were asked to have prepared for the present examination, the classes of consumers of the company, divided into the do-
185 mestic, industrial, and so forth, in the respective States. Have you been able to obtain that?

A. We have been able to secure figures as to the total sales, beginning with the year 1911. There was no analysis of earnings by States for the years 1911, 1912 and 1913. In the year 1911, we sold for domestic purposes 8,121,714,000 cubic feet. The same year, public institutions, 234,518,000 cubic feet. The same year, for industrial purposes, 16,980,108,000 cubic feet. Field gas, for the same year, 169,299,000. Miscellaneous sales, same year, 1,151,829 cubic feet. A grand total for the year of 1911 of 26,657,468,000 cubic feet.

In the year 1912, we sold in all States, for domestic purposes,

8,953,625,000 cubic feet. To public institutions, the same year, 189,266,000. For industrial purposes, the same year 20,262,505,000 cubic feet. For field use, the same year, 376,303,000. For miscellaneous use, the same year 1,474,751,000. A grand total for the year 1912 of 31,256,450,000 cubic feet.

In the year 1913, we sold for domestic use 8,657,674,000. For public institutions, the same year, 165,187,000. For industrial use, the same year, 22,416,830,000. For field use, the same year, 636,417,000. For miscellaneous purposes, the same year, 1,994,967,000; or a total for the year 1913 of 33,871,075,000 cubic feet.

186 For the year 1914, we can divide it by States. In 1914, in Pennsylvania, we sold for domestic use 6,280,031,000 cubic feet. Do you want Pennsylvania read off first?

Q. Read each class in each State.

A. Together?

Q. Together, yes.

A. In the State of Ohio, in the year 1914, we sold for domestic use, 2,295,357,000 cubic feet. For the same year, in West Virginia, for domestic use, we sold 848,481,000. For the year 1914, we sold in the State of Pennsylvania, to public institutions, 153,577,000 cubic feet. The same year, in Ohio, for public institutions, 61,940,000 cubic feet. For the same year, in West Virginia, for public institutions, 22,064,000 cubic feet. We sold in the year 1914, in the State of Pennsylvania, for industrial use, 10,601,230,000 cubic feet. For the same year, in Ohio, we sold for industrial use, 5,846,446,000. The same year, in the State of West Virginia, we sold for industrial use, 4,356,300,000. In the year 1914, we sold in Pennsylvania for field use, 542,203,000. In the same year, in Ohio, there was no gas sold for field use. For the same year, in the State of West Virginia, we sold 171,058,000 cubic feet for field use. In the year 1914 we sold in the State of Pennsylvania for miscellaneous use 1,139,-

187 415,000. In the same year, in the State of Ohio, we sold for miscellaneous use, 251,911,000. In the State of West Virginia, the same year, for miscellaneous use, 468,853,000. Now, do you want the totals?

Q. Yes.

A. We sold for all purposes in the State of Pennsylvania, in the year 1914, 18,716,456,000 cubic feet. In the same year, in the State of Ohio, for all purposes, 8,455,654,000 cubic feet. In the same year, for all purposes, in the State of West Virginia, 5,866,756,000; or a grand total of 33,038,866,000 cubic feet.

In the year 1915, we sold for domestic use, in the State of Pennsylvania, 6,214,839,000 cubic feet. In the same year, in the State of Ohio, we sold for domestic use, 2,242,060,000 cubic feet. For the same year, in the State of West Virginia, we sold for domestic use 839,760,000 cubic feet. In the year 1915 we sold in the State of Pennsylvania to public institutions 162,858,000 cubic feet. For the same year, we sold in Ohio, to public institutions, 60,718,000 cubic feet. In the same year, in West Virginia, for public institutions, 19,558,000. In the year 1915, we sold for industrial use in the State of Pennsylvania, 11,419,780,000 cubic feet. In the same year, in Ohio, for industrial use, 5,202,657,000 cubic feet. In the same year,

in the State of West Virginia, for industrial use, 4,685,761,-
188 000 cubic feet. In the year 1915, we sold in the State of Pennsylvania, for field use, 281,279,000 cubic feet. In the same year, in Ohio, for field use, 2,320,000 cubic feet. For the same year, in the State of West Virginia, for field use, 194,986,000. In the year 1915, in the State of Pennsylvania, we sold for miscellaneous use, 1,136,235,000 cubic feet. In the same year, in Ohio, for miscellaneous use, 234,446,000. In the same year, in West Virginia, we sold, for miscellaneous use, 507,529,000 cubic feet. We sold for all purposes in the year 1915, in the State of Pennsylvania, 19,214,991,-000 cubic feet. In the same year, for all purposes, in the State of Ohio, 7,742,201,000 cubic feet. In the same year, all sales in West Virginia amounted to 6,247,594,000 cubic feet. Or a grand total of 33,204,786,000 cubic feet.

In the year 1916, we sold for domestic use, in the State of Pennsylvania, 6,936,848,000 cubic feet. For the same year, in the State of Ohio, for domestic use, we sold 2,383,992,000 cubic feet. For the same year, in the State of West Virginia, for domestic use, 906,-982,000 cubic feet. In the year 1916, in the State of Pennsylvania, for public institutions, 174,391,000. For the same year, in the State
of Ohio, to public institutions, 61,090,000 cubic feet. The
189 same year, State of West Virginia, to public institutions, 19,641,000. In the year 1916, in the State of Pennsylvania, for industrial use, 13,157,537,000 cubic feet. The same year, in the State of Ohio, for industrial use, 5,398,998,000. The same year, for industrial use, in the State of West Virginia, 5,063,647,000 cubic feet. In the year 1916, we sold, in the State of Pennsylvania, for field use, 551,085,000 cubic feet. For the same year, in the State of Ohio, for field use, 1,080,000 cubic feet. For the same year, in the State of West Virginia, for field use, 212,104,000 cubic feet. In the year 1916, in the State of Pennsylvania, for miscellaneous use, 1,-135,804,000 cubic feet. For the same year, State of Ohio, for miscellaneous use, 250,258,000. For the same year, State of West Virginia, for miscellaneous use, 718,558,000 cubic feet. In the year 1916, we sold for all purposes in the State of Pennsylvania 21,935,-665,000 cubic feet. For the same year, in the State of Ohio, we sold, for all purposes, 8,095,418,000 cubic feet. The same year, in the State of West Virginia, we sold for all purposes 6,920,932,000 cubic feet, or a grand total of 36,952,015,000 cubic feet.

In the year 1917, we sold in the State of Pennsylvania,
190 for domestic use, 8,191,605,000 cubic feet. The same year, in the State of Ohio, we sold for domestic use, 2,746,338,000 cubic feet. The same year, in the State of West Virginia, for domestic use, 1,102,133,000 cubic feet. The same year, in the State of Pennsylvania, we sold to public institutions, 286,526,000 cubic feet. The same year, in the State of Ohio, to public institutions, 72,-228,000 cubic feet. In the same year, in West Virginia, to public institutions, 30,247,000 cubic feet. In the year 1917, we sold in the State of Pennsylvania, for industrial use, 10,310,898,000 cubic feet. The same year, in the State of Ohio, for industrial use, 4,332,984,000 cubic feet. The same year, in the State of West Virginia, for industrial use, 4,332,054,000 cubic feet. In the year 1917, in the

State of Pennsylvania, for field use, 624,115,000 cubic feet. The same year, State of Ohio, for field use, 1,842,000 cubic feet. In the same year, State of West Virginia, for field use, 162,003,000 cubic feet. In the year 1917, we sold in the State of Pennsylvania, for miscellaneous purposes, 1,168,650,000 cubic feet. The same year, State of Ohio, for miscellaneous use, 265,333,000 cubic feet. The same year, State of West Virginia, for miscellaneous use, 782,991,000 cubic feet. We sold in the year 1917, in the State of Pennsylvania, for all purposes, 20,581,794,000 cubic feet. The same
191 year, State of Ohio, for all purposes, 7,418,725,000 cubic feet. The same year, in the State of West Virginia, for all purposes, 6,409,428,000 cubic feet. Or a grand total of 34,409,947,000 cubic feet.

In the year 1918, in the State of Pennsylvania, we sold for domestic use, 8,082,208,000 cubic feet. The same year, State of Ohio, for domestic use, 2,707,305,000 cubic feet. The same year, State of West Virginia, for domestic use, 1,152,652,000 cubic feet. In 1918, in the State of Pennsylvania, to public institutions, 190,657,000 cubic feet. Same year, State of Ohio, to public institutions, 55,107,000 cubic feet. The same year, State of West Virginia, to public institutions, 31,806,000 cubic feet. In 1918, in the State of Pennsylvania, for industrial use, 7,763,524,000 cubic feet. The same year, in the State of Ohio, for industrial use, 3,441,048,000 cubic feet. For the same year, in the State of West Virginia, for industrial use, 3,560,305,000 cubic feet. In 1918, State of Pennsylvania, for field use, 396,693,000 cubic feet. In the same year, in Ohio, there was no gas sold for field use. In the same year, in the State of West Virginia, for field purposes, 185,858,000. In the year 1918, State of Pennsylvania, for miscellaneous use, we sold 1,064,418,000 cubic feet. For the same year, in Ohio, for miscellaneous use, 168,117,000 cubic feet. For the same
192 year, in the State of West Virginia, for miscellaneous use, 717,962,000 cubic feet. We sold in the year 1918, in the State of Pennsylvania, a total of 17,497,500,000 cubic feet. For the same year, in the State of Ohio, 6,371,577,000 cubic feet. In the same year, in the State of West Virginia, we sold 5,648,583,000 cubic feet. Or a grand total of 29,517,660,000 cubic feet.

In the year 1919 we sold in Pennsylvania, for domestic use, 7,966,954,000 cubic feet. For the same year, in the State of Ohio, for domestic use, 2,614,181,000 cubic feet. For the same year, in the State of West Virginia, for domestic use, 1,084,023,000 cubic feet. In the year 1919, we sold in Pennsylvania to public institutions 192,354,000 cubic feet. The same year, in Ohio, to public institutions, 54,800,000 cubic feet. In the same year, State of West Virginia, to public institutions, 31,854,000 cubic feet. In the year 1919, we sold in Pennsylvania for industrial use 5,757,124,000 cubic feet. For the same year, in the State of Ohio, for industrial purposes, 3,679,143,000 cubic feet. For the same year, in the State of West Virginia, for industrial use, 3,293,747,000 cubic feet. In the year 1919, we sold in Pennsylvania, for field use, 360,805,000 cubic

feet. For the same year, in the State of Ohio, we sold for
193 field use 606,000 cubic feet. For the same year, in the State of West Virginia, for field use, 222,291,000 cubic feet. In 1919, in Pennsylvania, for miscellaneous use, 1,090,031,000 cubic feet. For the same year, in Ohio, for miscellaneous use, 112,603,000 cubic feet. For the same year, in the State of West Virginia, for Miscellaneous use, 762,402,000. We sold in the year 1919, for all purposes, State of Pennsylvania, 15,367,268,000 cubic feet. We sold, in the same year, in Ohio, for all purposes, 6,461,333,000 cubic feet. In the same year, State of West Virginia, we sold, for all purposes, 5,394,317,000 cubic feet. Or a grand total of 27,222,-918,000 cubic feet.

Q. At our last session, you were asked to prepare and present at this hearing the pipe line mileage, year by year, in the various States, rising above the 2-inch lines. Have you been able to prepare that?

A. Well now, I wasn't advised as to "year by year." It was my understanding, I think, that our total pipe line mileage now, that is, for the year 1919——

Q. No, the request was for year by year, as far as possible.

A. Well now, I will tell you, we can secure it year by year. It was my understanding it was as of December 31st, 1919.

Q. Well, give us that.

A. I might say that it took the Engineering Department—
194 I don't know how many days—three or four days, at least,— to secure this data for the year 1919.

Q. Well, give us for that period now, whatever you have, and we will see later about the remainder.

A. We have in the State of Pennsylvania as of December 31st, 1919, a total of 4,641,940 feet of pipe 2 inches or larger; equaling 879.16 miles. That is, on city plants. In the State of Pennsylvania, for field use, 6,302,078 feet pipe 2 inches or larger; equaling 1,193.57 miles. Or a total of 10,944,018 feet; equaling 2,072.73 miles of pipe in the State of Pennsylvania, 2 inches in size or over. In the State of West Virginia, for a period ending December 31st, 1919, we had, in city plants, 721,515 feet, equaling 136.65 miles. Field and main line, same State, 3,379,692 feet; equaling 640.09 miles. A grand total in the State of West Virginia, of 4,101,209 feet; equaling 776.74 miles. In the State of Ohio, for a period ending December 31st, 1919, in the city plants we had 1,374,134 feet; equaling 260.25 miles. Field, main lines, 479,859 feet; equaling 90.88 miles. Or a total in the State of Ohio of 1,853,993 feet; equaling 351.13 miles. A grand total in all States, in city plants, of 6,737,591 feet; equaling 1,276.06 miles. Field and main lines, 10,161,629 feet; equaling 1,924.54 miles. Or a grand total
195 of 16,899,220 feet; equaling 3,200.6 miles.

Q. As I understand, this is the mileage of pipe lines of 2-inch and over?

A. Yes, sir.

Q. It includes the 2-inch?

A. It includes the 2-inch.

Q. But does not include any lines under 2-inch?
A. No, sir.
Q. How long would it take to prepare this same information for the years previous?
A. I would say it would take many days; well, say two weeks, perhaps, if we could get the engineering force on it.

Mr. Weil: I would ask counsel for West Virginia if they desire this same information for previous years, or if this is satisfactory?
Mr. Hoffheimer: We would like to have the information, if possible. We might be able to get along with an approximation, and if we think we have sufficient without these exact details, we will notify you.

The Witness: One of the difficulties is—say for instance,
196 in the State of West Virginia, we return our property according to each district in which the company is operating; I mean each taxing district. There are a great many of them. They have to go down through and pick those out in those different little taxing districts, and total them up. We can get it for you if you desire.

Mr. Hoffheimer:

Q. But you do make one single report to the Board of Public Works?
A. Yes, sir, each year. That is, in West Virginia.

Mr. Weil:

Q. Are those figures on file in the State of West Virginia, as to the State of West Virginia?
A. Yes, sir.
Q. You don't make similar reports in other States?
A. No, sir, not in detail like that.
Q. Have you any data in your files by which you can go back, in other States, as to this pipe line mileage?
A. No, I think the only thing we could do would be to just dig it out, Mr. Weil,—the amount of pipe laid each year, and the
197 amount taken up, and subtract from what you have. We have an inventory which the Company made as of June 30th, 1914, that would show the data at that time. It would be very hard for us to get that information.

Mr. Weil: Well then, we will produce the information as of June 30th, 1914, which we have, and we will not agree to put all the men and engineers, and so forth, upon this, for the prior period. I do not believe that counsel is justified in asking us to go to that trouble and expense. If it becomes necessary, we will give them the opportunity to put their own men upon the books and dig it out themselves.
Mr. Hoffheimer: Suppose we leave it in this way: That if we desire that information, we will notify you.

Mr. Weil: Very well. We will give you what we have, for the year 1914, at our next session, or perhaps during the present session; because the inventories were taken at that time, and we can furnish it.

198 Mr. Weil:

Q. Were there any further statements, Mr. Quay?

A. Why, I believe we were requested to submit a smaller scale map, to take the place of our large official map known as Pennsylvania Exhibit No. 1.

(Witness produces map.)

Q. Now, is this map which you now produce an exact copy of Exhibit No. 1?

A. I have the engineer here, who states to me it is an exact exhibit.

Q. An exact copy?

A. Yes, sir, an exact copy of No. 1.

Q. Exhibit No. 1 is a large wall map, on heavy cloth, and so forth, in use by the company?

A. Yes, sir.

Mr. Weil: I will ask that this map be marked "Complainants' Exhibit No. 1," and to be substituted for the larger map, of which this is a copy.

The Commissioner: May I suggest that as you have already marked the large map "Pennsylvania Exhibit No. 1," you now mark this "Pennsylvania Exhibit No. 1-*a*," so that it may accom-
199 pany the large map, and so that the large map may be used if you wish to take it to Washington.

Mr. Weil: At the suggestion of the Commissioner, let this be marked then "Commonwealth of Pennsylvania, Complainants' Exhibit No. 1-*a*."

(Plan now marked "Commonwealth of Pennsylvania, Complainants' Exhibit No. 1-*a*.")

Mr. Weil: There were a number of suggestions with reference to the corrections of the stenographic notes, or the transcript of the stenographic notes of testimony. It seems to me that we ought to agree upon a uniform course of procedure, which should be that only upon the end of the examination of the particular witness, that then with the complete testimony before us, both parties should call attention to such errata as occurs to them, and have it all done at one time and not interspersed throughout the taking of the testimony. Much of it, for example, will be corrected upon the cross
200 examination or re-examination. Is that suggestion satisfactory?

Here the hearing was adjourned to meet Tuesday, June 1st, 1920, at 10:00 o'clock A. M.

201 Tuesday, June 1st, 1920.

And now Tuesday, June 1, 1920, the hour of 10:00 o'clock A. M. having arrived, hearing resumed pursuant to adjournment; the Commissioner and counsel present as heretofore noted, Freeman T. Eagleson, Esq., being also present on behalf of the State of Ohio.

The Commissioner: Regarding the correction of notes, which was the last subject mentioned yesterday, counsel for the State of West Virginia have said that they wish to have corrections made, so far as possible, as the matter proceeds from day to day. Counsel for the Commonwealth of Pennsylvania have stated that it seems preferable to them to make corrections by way of errata at the conclusion of the testimony of each witness, so far as feasible. It occurs to me that this will have to be left in this posture: Simply that in case of the delivery of an instalment of testimony, if an obvious error is seen by any counsel, he can call attention to it, and, if agreed upon, then
202 and there the correction will be made. On the other hand, counsel concluding with the witness will be permitted to make any corrections at that time that they propose, submit any errata that may occur to them, and thus take care of errors as they see fit, on each side. It, after all, is simply a practical matter of meeting the wishes of counsel. I do not think counsel for Pennsylvania would object to a correction being made forthwith in the transcript of the notes, if attention is called to it seasonably by the other side. On the other hand, if such corrections are not proposed and promptly agreed to, the transcript of the notes will be taken as the record of the hearing, and such corrections made against that transcript as later may be proposed, either by way of an outright correction or by way of further examination of the witness whose testimony was taken with an alleged error in it.

Is that satisfactory?

Mr. Weil: Entirely.

Mr. Hoffheimer: It is satisfactory to the State of West Virginia.

203 H. A. QUAY recalled.

Cross-examination (resumed).

Mr. Hoffheimer:

Q. When did you go to work for the Mountain State Gas Company?

A. I imagine the first work I did for the Mountain State Gas Company—oh, I would say, was between the years 1904 and 1906.

Q. What was your line of duty?

A. I was chief inspector, having charge of men who inspected the various consumers' homes, and inspecting the plants and lines and property of the company; in some instances examining and making an inspection of wells.

Q. In what territory did you work?

A. Do you mean for the Mountain State Gas Company?

Q. Yes.

A. I worked at Sistersville, West Virginia, and, in fact, every town that they had on their plant, out through the country there, several pump stations, with communities that were around them. I think, starting out near a place called Stringtown, West Virginia.

Q. What county is that?

A. I couldn't tell you exactly.

Q. Tyler County?

204 A. Tyler County, yes.

Q. Well, starting there, how far did you go? Give us some of the names of the principal cities and towns in the vicinity of which you were working?

A. I think that we inspected in Sistersville; Parkersburg was part of the Mountain State Gas Company, a little town right below Sistersville there—St. Marys, I believe it is.

Q. In Ohio?

A. Yes, sir. It has been a good many years, and I have been in a great many towns since. I think those are the main communities of the Mountain State Gas Company.

Q. Where were those wells which you inspected?

A. That would be hard for me to tell you now. My memory would——

Q. I mean, in what counties, or in what extent of territory?

A. It seems to me that we started, as I told you, out near Shirley, or Stringtown.

Q. Tyler County?

A. Yes, sir, and we came in on our lines—I think it was Braden Station, and on into Sistersville. They were scattered around. As a matter of fact, I didn't testify, nor neither do I say now, that I went over the wells of the Mountain State. I say, on some companies, we inspected the wells as well as the other property.

205 Q. Where were those compressing stations of the Mountain State Gas Company?

A. I don't think that the Mountain State had any compressing stations belonging to the Mountain State. Braden Station, or this station which I refer to, I believe, was an oil station. They furnished gas to it.

Q. And, I presume that the Mountain State Gas Company had pipe lines connecting its wells in all that territory?

A. I presume so.

Q. Don't you know it?

A. No, I don't. That is, I stated that I don't recollect whether we went over the wells of the Mountain State or not. I said on some companies we took in the wells.

Q. Then you are not able to say whether the Mountain State Gas had any pipe lines at all?

A. I know they had pipe lines through which they conveyed and sold gas to consumers.

Q. Those were located where?

A. Oh, various places.

Q. Those you have mentioned?

A. Yes, sir.

Q. At Parkersburg and the others?

A. Yes, sir.

Q. From the Mountain State, to what company did you go?

A. That, my memory is not clear enough on, but it is my belief that we went to the River Gas Company at Marietta, Ohio.

206 Q. While you were working for the Mountain State, did it own any leases?

A. That I would be unable to say.

Q. Who would know about that?

A. I presume the Hope Natural Gas Company would know now. I believe they own that property.

Q. Who was your immediate superior—to whom did you report?

A. I reported to Robert Hampton.

Q. Where was he located?

A. Oil City, Pennsylvania.

Q. What position did he hold?

A. I believe on one or two companies he was auditor.

Q. Why do you say that the Hope Natural Gas Company would have the information in regard to the Mountain State?

A. As previously stated, I believe they now own that property.

Q. Took over the Mountain State property?

A. That is my belief.

Q. After you left the Mountain State?

A. Oh, yes. In order now, perhaps, to make the situation plain to you: These various companies that I worked on, I had special training in this matter of inspecting, and as these companies desired an inspection, they made arrangements whereby I and my men were sent on to their plants to inspect. When I say "worked for
207 them," I don't mean that I got out and drilled wells for them, or laid lines for them, or work of that kind. I have changed meters, gone into towns and taken every meter out and repaired them for them, and work of that kind, on some plants.

Q. In the same way, you worked for the Keener Oil & Gas Company?

A. I inspected at Weston, I believe, twice, yes, sir.

Q. That was at Weston, in Lewis County?

A. Yes, sir.

Q. Where was the Keener Oil & Gas Company furnishing gas at that time?

A. In the town and, I believe, to a few consumers out about town.

Q. That was Weston?

A. Yes, sir. I believe they had a brick works or a brick yard, was one of their customers.

Q. That was municipal service there, at Weston?

A. I believe so.

Q. Did you make any inspection in the Keener gas field?

A. The Keener Oil Company, or the Keener Gas Company, as I recollect it, I don't think, had any field. I think they purchased their gas.

Q. From whom?

A. The Hope Natural Gas Company, if I recollect, at that time.

Q. Are you able to approximate the dates when you in-
208 spected Keener properties?

A. Only roughly. I would say along in 1903; probably again along in 1907. Those dates, I want you to understand, are to the best of my recollection.

Q. When did you inspect properties of the Clarksburg Light & Heat Company?

A. I would say that was approximately in the same period of time.

Q. What territory were they supplying at the time you did that?

A. They were supplying the town of Clarksburg. I recollect there was one community—I was going to say that I believe there was one little town out some ten or twelve miles from Clarksburg they supplied gas to. I am not sure—Williamsport or some town,—No, not there. The town of Clarksburg, and I believe one other small community out from Clarksburg.

Q. There was some surrounding suburban territory that you include in the supply?

A. I believe so.

Q. Adamstown, and places like that?

A. Glen Elk, isn't it? To the community, or rather, a built-up community.

Q. As a matter of fact, when you speak of the Keener Oil
209 & Gas Company having received its gas supply from the Hope Natural Gas Company, didn't you intend to say that the Keener got its supply from the Clarksburg Light & Heat Company?

A. I don't. I didn't mean to say that; that is, that they got their gas from the Clarksburg Light & Heat. My recollection is that they got it from the Hope. I might be wrong about that, Mr. Hoffheimer.

Q. Where was the gas territory of the Clarksburg Light & Heat Company, so far as it came under your observation?

A. I believe the second time I inspected the Clarksburg Light & Heat Company, they were drilling wells,—oh, within three or four or five miles of the town, in the immediate vicinity of the town of Clarksburg.

Q. Do you remember a field known as the "Big Isaac Field"?

A. Only just by history.

Q. You did know at the time that the Clarksburg Light & Heat Company got a great deal of its gas from that field?

A. No, I couldn't say that, because my recollection is—I have no recollection of that. They probably do. I couldn't say.

Q. When did you inspect for or work for the Hope Natural Gas Company?

A. I think the first time I worked on the Hope was about the year 1902, possibly 1903.

210 Q. How long did you continue?

A. I think we were on the Hope properties perhaps six months.

Q. And did you go back at some subsequent time?

A. I would say that approximately four years afterwards we went over their property again.

Q. That would get you up to about 1906?

A. I would say so; or 1908.

Q. What territory did you inspect for the Hope?

A. I recollect that the first time we started in at Mannington, Mannington County, and inspected consumers throughout the county. From there we went into what they call the Shirley District, the Stringtown district; I and my men, you understand. We went over all the property which the Hope Company owned at that time.

Q. At that time was the Hope furnishing the municipal supply for Mannington?

A. They were.

Q. How about Parkersburg?

A. Parkersburg, it is my recollection, was the Mountain State. Now, I might be wrong about that.

Q. What are some of the other towns or cities that you remember inspecting for the Hope?

211 A. Well, the towns along the Short Line Railroad there were some of them.

Q. That is, the line running out from Clarksburg toward New Martinsville?

A. Yes, sir, Pine Grove, what they call Piney Fork, Shirley, Stringtown, and those smaller communities; West Union, I believe.

Q. How about Harrison County south of Clarksburg? Did you get down into that direction?

A. If they had property at that time, we no doubt went over that.

Q. Where was the Hope's gas territory which came under your observation at that time?

A. The inspection for the Hope Company was confined entirely to their distribution and sales.

Q. You spoke the other day of the Manufacturers Light & Heat Company, the Pennsylvania corporation, having entered into the State of West Virginia in 1886, or 1887, I believe. Is that your recollection about it?

A. No, the Manufacturers Light & Heat, I believe, secured the Wheeling Natural Gas Company along in the year 1902 or 1903.

Q. And that is the earliest date you have of the entry of the Pennsylvania corporation known as the Manufacturers Light & Heat Company, into West Virginia?

212 A. That is the history I have, to the best of my recollection.

Q. Since we were here before, have you been able to refresh your recollection in any way so as to enable you to state where the territory of the Wheeling Natural Gas Company was at the time it was taken over by the Manufacturers Light & Heat Company in 1902 or 1903?

A. You mean the fields?

Q. Yes.

A. No, I have not. There is only Mr. Layton and I—he is the only present officer of the company that has been with them any great length of time, and who might possibly know that early history. His duties, however, were mostly confined to the Pittsburgh district. I have really no authentic way of making inquiries, unless

I should hunt up some who were associated with the company at that time.

Q. When did the Wheeling Natural Gas Company last hold or operate any territory in West Virginia?

A. As the Wheeling Natural Gas Company, we carried the Wheeling Natural Gas Company, I believe, up to the year 1913 or 1914; in there somewhere.

Q. As a matter of fact, the Wheeling Natural Gas Company's properties were operated by or in the name of the Wheeling Natural Gas Company until May, 1915, were they not?

213 A. I believe that we had an account "Wheeling Natural Gas Company." There were separate portions; at least, a portion of their property that remained as the Wheeling Natural Gas Company. As to the year, I don't recollect—along in 1913 or 1914, it might be 1915.

Q. But up to that time the properties which had previously been acquired by the Wheeling Natural Gas Company were just held and operated as the Wheeling Natural Gas Company?

A. I wouldn't want to say that, because I don't know. The possibilities are that in some districts, acreage, for instance, which the Wheeling Natural Gas Company may have had, might have been sold to some other companies. I would be absolutely unable to answer that, because I don't know.

Q. In other words, you can't say whether the question embodies a correct statement or an incorrect one?

A. No, I can't.

Q. Now, how about the Tri-State Gas Company? Was that not operated, and its property held, by and in the name of the Tri-State Gas Company up until May, 1915, or approximately that time?

A. We had a separate account, "Tri-State Gas Company." My answer to that would be the same as the answer to the Wheeling Natural Gas Company.

214 Q. In other words, you don't know?

A. No.

Q. Now, how about the Cameron Oil & Gas Company? How long was that carried as a separate corporation?

A. I would be unable to answer that. These changes, you understand, Mr. Hoffheimer, came when I held the position, I believe, of District Manager. I was not Assistant General Manager, nor General Manager at the time. It is my recollection that practically all the companies were put in and operated as the Manufacturers Light & Heat Company at one and the same time.

Q. You did, as a matter of fact, deliver the properties themselves? By that, I mean the leases and territory in the field, pipe lines and plants, were taken over; you did carry these companies separately on your books?

A. They were separate accounts in the names of those companies, yes, sir.

Q. The fact is that until the property itself was taken up and taken over by the Manufacturers Light & Heat Company of Pennsylvania, the position of the Pennsylvania Company was that of a

holding company, simply holding those properties by stock ownership?

A. No, I believe they owned the property.

215 Q. When?

A. I think they purchased the majority of this property, as I stated, in the year 1902 or 1903.

Q. Wasn't it by purchasing some of the stock of these companies?

A. I couldn't tell you how it was purchased; I never even asked.

Q. But when you spoke the other day——

A. It might have been merged, Mr. Hoffheimer. I wouldn't want to say it wasn't merged.

Q. But when you spoke the other day, and also today, of the Manufacturers Light & Heat Company of Pennsylvania having acquired these properties in 1902 or 1903, you don't pretend to say whether that acquisition was merely by taking over the physical properties, or whether it was merely a control gained by purchasing stock in these various companies such as the Wheeling Natural Gas Company and the others?

A. The history of the company as given to me is that they purchased those properties entirely. That is, they became the owners of the property.

Q. You are not sitting here and swearing that that is true, are you?

A. I am telling you that that is the history of the company as given me. You understand, I was not connected with the

216 company at the time, nor for quite a few years afterwards.

Q. Mr. Layton is the man who would know about that?

A. No, I doubt very much whether Mr. Layton would. I believe Mr. Layton was connected with the Manufacturers Company at that time, but I think his duties were in Pittsburgh, Pennsylvania. That is, I think he had charge of the selling of gas in this district.

Q. Who is the individual who would know?

A. Oh, I presume whoever were the officers of the company at that time would be the only ones that would know.

Q. Who were they, do you know that?

A. No, I couldn't tell you definitely.

Q. Will your corporate records show those transactions?

A. I presume so.

Q. Who is in charge of those?

A. At the present time, Mr. Radcliffe, Treasurer, and Mr. Seibert, Assistant Treasurer and Secretary. Mr. Layton might know, you understand, Mr. Hoffheimer. I don't know.

Q. Did I correctly understand you to say the other day that there was not a Manufacturers Light & Heat Company of West Virginia?

A. No, there is no Manufacturers Light & Heat Company

217 of West Virginia.

Q. Was there ever any such company?

A. Not to my knowledge. There was a Manufacturers Company, but not a Manufacturers Light & Heat Company.

Q. When you say "Manufacturers Company", you mean the Man-

ufacturers Gas Company, which supplied gas to industries at Wheeling?

A. Correct.

Q. And that gas was supplied to the Manufacturers Gas Company by the Wheeling Natural Gas Company?

A. That is the history as I have it, yes, sir.

Q. When you said the other day that the Manufacturers Light & Heat Company entered into West Virginia in or about 1888 or 1889—I believe I said 1886 or 1887 before—what did you refer to?

A. I have no recollection of stating that the Manufacturers Light & Heat Company entered West Virginia in 1888 or 1889. I believe I said the Manufacturers Light & Heat Company and the Wheeling Company—having in mind the fact that, treating the proposition as a whole—that that was about the time they entered West Virginia.

Q. In other words, there you were treating the Manufacturers Light & Heat Company of Pennsylvania, as it now exists, as having existed at that time, so far as the scope of operations
218 was concerned?

A. I had in mind the property which the company has at the present time through the Wheeling Natural Gas; they started operations about that year. That is the history as I have it.

Q. Now, how far from the line between Pennsylvania and West Virginia was this Blacksville Territory, into which you say the Manufacturers entered?

A. You mean the Blacksville Oil & Gas Company, which the Company owned?

Q. I think I understood you to say the other day that along in the late 80's the Manufacturers Light and Heat Company did enter into West Virginia, and you gave various territories, among them Blacksville?

A. Blacksville is correct. It is my recollection that the Blacksville is close to the line dividing the State of Pennsylvania and West Virginia.

Q. Can you approximate the distance?

A. No.

Q. Well, it is within a few miles, isn't it?

A. I would say, roughly, within six or eight or ten miles.

Q. Where was this Cameron field to which you referred?

A. The Cameron field, our Cameron field, consists of leases, wells and property, in both the States of Pennsylvania and West Virginia, on both sides of the line, in Greene County and in Marshall
219 County; Greene County, Pennsylvania, and Marshall County, West Virginia.

Q. But I am talking now of that Cameron field which you referred to in your previous testimony as one of the places into which the Manufacturers Light & Heat Company entered very early, in West Virginia?

A. Entered through the purchase of the Wheeling Natural Gas Company.

Q. And where was that?

A. That is in Marshall County, West Virginia.

Q. What town or towns would help to identify it on the map?
A. Well, you might say the town of Cameron might.
Q. What town on the map would identify the location of what you referred to as the Hundred field?
A. The town of Hundred would.
Q. What county?
A. That is Wetzel County.
Q. How far is Hundred from the Pennsylvania line?
A. I don't know.
Q. The Hundred field was also a Wheeling Natural Gas Company territory?
A. The history as I have it is that at least part of that field was the property of the Wheeling Natural Gas Company. I would not desire at all to say that all of it was. In fact, the company
220 has secured considerable acreage, I believe, since they purchased the Wheeling Natural Gas Company.
Q. After the Light & Heat Company acquired the Wheeling Natural Gas Company, or an interest in it, was any additional acreage, or leaseholds, acquired by the Wheeling Natural Gas Company?
A. That I would be unable to say, because I hadn't charge of that work at that time. I might say that since I have been General Manager, all acreage that has been secured has been in the name of the Manufacturers Light & Heat Company.
Q. And that covers what period?
A. Well, a year ago last February.
Q. Referring to the map which has been offered in evidence in connection with your evidence, as "Pennsylvania Exhibit No. 1-*a*," at the points farthest south, in the immediate vicinity of the Sedalia compressing station: Do you get any gas from the territory south of the Sedalia compressing station?
A. We do.
Q. From what source?
A. From our own production.
Q. Where is that?
A. Also gas purchased.
Q. Where is that production of your own situated?
221 A. In Doddridge County, West Virginia.
Q. And the gas purchased comes from what source?
A. We purchased some gas produced in Doddridge County, West Virginia, and we also have delivered to us at that point gas produced elsewhere. As to where that gas is produced, I am not in a position to say, I don't know.
Q. Who are the people who deliver it to you?
A. The larger portion of the gas is secured through the Hope Natural Gas Company.
Q. This map does not show the lines of the Hope Natural Gas Company by which its deliveries are made?
A. It does not. It only shows the lines owned by the Manufacturers Light & Heat Company.

Q. Relatively, where do those lines of the Hope Natural Gas Company supply, coming up to the point of delivery?

A. I would be unable to state; it would be an absolute mere guess on my part. I can give you the point of delivery. The point of delivery is at the Sedalia compressing station,—a point near the Sedalia compressing station.

Q. Is there any compressing station on the line of the Hope Natural Company in dealing with the gas which is delivered to the Manufacturers at the Sedalia compressing station?

A. That I would be unable to answer. I don't know of
222 my own knowledge where their gas comes from.

Q. All of the gas which you get from the Hope Natural Gas Company, or from other producers in the territory south of the Sedalia compressing station,—all of the gas which your company itself produces in Doddridge County, flows northward to the Sedalia compressing station and passes through that station? Isn't that correct?

A. All that we purchase or buy south of the Sedalia station goes in a northerly direction to the Sedalia compressing station, yes.

Q. Why is that Sedalia compressing station there?

A. That Sedalia compressing station is there for the purpose of taking the gas at lower pressures and compressing it to a higher pressure and discharging it into their main lines, which supplies the customers in the various States they serve.

Q. When that gas has passed through the Sedalia compressing station, what is the next compressing station through which it passes?

A. That depends, of course, on conditions. Sometimes—there have been times—when that gas from the Sedalia compressing station has proceeded up, and a portion of it at least would go to the Porters Falls Compressing Station. That is not the general manner of operating, however. It goes into our sixteen-inch line,
223 and then into the twenty-inch line, and does not pass through any other compressing station.

Q. Does it not pass through the Majorsville Compressing Station?

A. It does not.

Q. How about the Porters Falls Compressing Station?

A. What about? What information do you want relative to the Porters Falls?

Q. What is the next compressing station through which the gas comes from the Porters Falls?

A. There is none, as a general proposition; no other station which handles the gas which passes through the Porters Falls. Of course you understand that there might be conditions occur at times which will necessitate the changing or the throwing of the gas. Ordinarily on our system the gas all comes in together and goes wherever it pleases, unless the line breaks or a compressing station is flooded out, or some break in the line which necessitates the handling of the gas in a different manner.

Q. Then you say that it is a mere matter of the physical character of the gas or its tendency to go in one direction or other, which

determines whether any particular gas goes into West Virginia or goes into Pennsylvania?

224 A. To a great extent.

Q. In other words, still it rests with the natural character of the gas, or Providence, whether West Virginia or whether Pennsylvania gets the gas?

A. No, I don't say that at all. I say that the flow of gas in your lines is regulated by the demand. If you have a large demand for gas at one point, the gas naturally is going to go in that direction, as the pressure ordinarily is reduced at that point in comparison with other plants on the lines.

Q. Aside from that natural tendency of gas or flow in the direction of the greatest loads on the lines, don't you have some means of determining yourself and directing the destination of the gas?

A. It can be done by the closing of the gates or the partial closing of gates; you could send the gas most in any direction.

Q. And as a matter of fact, that is the way in which it is done?

A. If you mean to imply by your question that the gates are closed and clamped, I would say as a general practice, no sir. At times, yes. As a general proposition the system is combined together, the gas goes and comes. I do not mean to say by that that

225 there are not gates which are closed, or pipe lines, because they are.

Q. And the fact is that your pipe line system as a whole is equipped with those gates for use in case of need?

A. I would say that they are fairly well equipped, so that in case of emergency lines can be shut off, yes, sir.

Q. In other words, if your gas didn't get to the right destination through its own tendencies, the gates would enable you to send it to the right place?

A. No, I wouldn't want to say that, Mr. Hoffheimer, for that wouldn't be so at all times.

Q. What are the gates good for then?

A. You might not have the gas to send.

Q. From the southermost end of the Manufacturers' own lines, south of the Sedalia Compressing Station, and running up to the Sedalia Compressing Station, what local supply is there furnished by the Manufacturers Light and Heat Company?

A. There are no large communities, I am sure of that. To the best of my recollection, no small communities. There might be consumers, and no doubt are consumers along the line.

Q. That is, there are some smaller lines branching off of that pipe line?

226 A. It is possible that there are smaller lines branching off, or it might be that the main line is tapped, and the consumers connected to that line. I don't know in what manner they are connected.

Q. But as your gas proceeds northwardly from the Sedalia Compressing Station, up to and in the direction of Loudenville are there any supply lines branching off of those trunk lines?

A. That I would be unable to answer.

Q. What territory do you supply in there?

A. We supply any consumers which might be along the line. For instance I believe there is one town called Beebe; I have no doubt that we supply four or five or six houses there; we might supply them all—I don't know that.

Q. Where does that gas come from?

A. That gas there, that might come from the Porters Falls Compressing Station, and there is times when it might come from the Hundred Compressing Station.

Q. By that you mean gas which has passed through either the Sedalia or the Porters Falls or the Hundred Compressing Station?

A. Yes, sir.

Q. Now, in regard to your gas leaving Porters Falls Compressing Station and running up in the direction of Rosbys Rock, are
227 there any community or communities there which are supplied by you?

A. Yes, sir. The town of New Martinsville would probably receive a supply of gas from the Porters Falls Station. Now at other times they might receive it from the gas coming from the Sedalia Compressing Station, and nat other times they might receive it coming from the Hundred Compressing Station.

Q. If it got to New Martinsville from the Sedalia Compressing Station, what route would it follow?

A. It would have to go from Sedalia into the field lines, what we call the Iuka Field, or the field supplying Porters Falls Station. Or it might come from this ten inch connection in Proctor Township, near the dividing line between Proctor Township and Meade Township.

Q. But if it was Sedalia Compressing Station gas, it would leave the Sedalia Compressing Station through the sixteen inch line?

A. Correct.

Q. Shown on your map. And then enter what line at what point?

A. It enters through a ten inch line at a station designated by us as Red Onion Station. Near what town I would be unable to tell you.

228 Q. And then it would proceed in what way?

A. It would proceed up through the ten inch line into the Porters Falls Compressing Station and would go around all the field lines, perhaps, the field supplying Porters Falls.

Q. That is the little network between Red Onion Station and Porters Falls?

A. Any lines that would be open, yes, sir.

Q. Well, which way would it go to get to New Martinsville?

A. It might go through this four inch connection in the Magnolia District in Wetzel County.

Q. How else would it get to New Martinsville?

A. It could come back through this ten inch connection which I previously stated.

Q. If it was going to New Martinsville, it would have to go into the four inch line leading up to New Martinsville?

A. Not necessarily. We have two methods of supplying the town of New Martinsville.

Q. What is the other one?

A. The two I have already stated; one through the four inch connection in the Magnolia District of Wetzel County, and the outer through the ten inch connection here in Proctor Township near the dividing line between Proctor Township and Meade Township. That is Meade Township, Marshall County.

229 Q. That would be gas coming from the Hundred Compressing Station?

A. There have been times when the Porters Falls plant, or rather the Sedalia Plant, and the Porters Falls plant have been shut down. There have been times when they broke down, there have been times when they have been flooded out, and the gas then from the Hundred Compressing Station would go up near the point of the junction at Loudenville, Marshall County, back down in a southerly direction through our sixteen inch main line, and back into the four and ten inch lines which I have mentioned.

Q. But as an ordinary thing, you wouldn't use the Hundred Compressing Station for the lines leading from it to supply New Martinsville?

A. As an ordinary proposition, not, no, sir.

Q. The Hundred Compressing Station is near Pennsylvania, and in the ordinary course of operations you would send your gas in that direction or towards——

A. When it leaves the Hundred Compressing Station it goes any place that gas will go, any level that it seeks.

Q. What lines does gas from the Porters Falls Compressing Station travel?

A. What lines?

Q. Yes.

A. The ordinary procedure is up through the ten inch
230 line right here (ind.), this line passing through Wetzel County, and into Marshall County, and along into Ohio County, and into Brooke County. In Brooke County it leaves the State of West Virginia entirely, and crosses over into the State of Ohio.

Q. You are referring now to the line passing northerly from The Porters Falls Compressing station and a little to the east of the Rosbys Rock Compressing Station, up to the junction of the ten inch line with an eight inch line and another section of the ten inch line, just north of Elm Grove and Triadelphia; and then northerly again to a point very close to the station A producing station?

A. That has the ten inch line which I mentioned. In addition to that the gas leaves the Porters Falls station through an eight inch line.

Q. That very closely parallels the ten inch line?

A. At points, yes, sir, up to near Proctor. Then the gas comes back into the ten inch line again. In other words, the two lines convey gas from Porters Falls up to a place called Proctor, and there, through a connection, the gas from the eight inch passes again into the ten inch line.

Q. What West Virginia towns does the gas from that ten inch line leading from the Porters Falls compressor supply?

A. That I would be unable to state. I can give you the
231 towns which we supply with gas, but as to stating that the gas comes from Porters Falls, I would be absolutely unable to tell you.

Q. Put it this way: what lines branch off from that ten inch pipe line proceeding north from the Porters Falls Compressing Station?

A. There are a good many. The first line that branches off is a four inch line, which is connected to it in Magnolia township; that is Wetzel County, and supplies New Martinsville, and also supplies three little communities in Ohio, Sardis, Duffy and Hannibal.

Q. They are right across the river from New Martinsville?

A. They are on the opposite side of the river from New Martinsville; I would say probably two miles and a half up the river, or two miles down the river.

Q. And the four inch line is a four inch line of the Wetzel Gas Gas Company, isn't it?

A. The history of the company is—I have it—the Wetzel Gas Company's line, yes, sir. Now there is a connection here also to the Tri-State lines in the Proctor District, Wetzel County. I do not believe—there possibly is a connection there, between the ten inch line leading from Porters Falls and the ten inch line coming from the Cameron field at a point east of Rosbys Rock, but I am not
positive, I don't want to testify that there is. We go fur-
232 ther north right here (ind.), going back a little bit near our office located near Proctor; there is a connection connecting the eight and ten inch lines. There is also another connection at that point, very close to that point, which connects with the field lines in what is designated and known as the Proctor Field.

Q. Well I think you are getting away a little bit from what I was asking you.

A. You want the various connections out of this line (ind.)?

Q. No, I want to find out what communities you serve off of those lines.

A. You mean, that might get their supply of gas from that line?

Q. No, what pipe lines or pipes branch off of this main trunk line?

A. I am giving them to you now. In Union Township, Marshall County, there is a connection from the ten inch coming from Porters Falls, supplying the town of Sherard. In the Triadelphia District, Ohio County, there is a ten inch connection. There is also a connection at this point with an eight inch line which conveys gas from the Majorsville Compressing Station. In the Butler District there are a five and five-eighths and a three-inch line. Another line branches off from the ten inch line coming from the Porters Falls station, in the Buffalo District, Brooke County, and crosses
the Ohio River and enters into the State of Ohio. At Sta-
233 tion A in Brooke County there are two eight inch connections, or rather four eight inch connections. Two of these eight inch connections cross the Ohio River and enter the State of Ohio. The other two connections are lines which connect with

lines in the State of Pennsylvania. Do you want me to follow it on up?

Q. Let us retrace that, and see if I can't get you to answer my question now. You have told us about the branch line running off to New Martinsville. You have told us of a line running off at Sherard. Is there a single place between the line to New Martinsville and the branch line to Sherard off of which any service line or smaller line supplying a community in West Virginia exists?

A. I would consider that this connection (ind.) might supply that.

Q. What are you referring to?

A. I am referring to where the ten inch line crosses the ten inch line coming from the Porters Falls Station in the Proctor District, Wetzel County.

Q. That is somewhat near the village of Peabody, is it?

A. That is shown by the map just north, yes, sir. There are also two connections near our office, near Proctor, that supply these lines.

Q. What towns or communities are furnished from those lines?

A. You mean the last two that I mentioned?

234 Q. Yes.

A. Those connections take and tie both lines,—the gas from both lines leading from the Porters Falls station,—and permitting gas from both those lines to enter into the ten inch line which travels north through West Virginia. I would be unable to state what communities that gas goes to.

Q. That is not the point. I am trying to find what communities are served by the two branches, one of which comes off near Peabody and one of which comes off near your office at Proctor.

A. That one at Peabody might supply the towns of New Martinsville, Duffy, Hannibal, Sardis, and Clarington—the last four named towns in Ohio.

Q. All right, tell us about the line which branches off at Proctor?

A. The two connections at Proctor, as I stated, permit the gas coming from Porters Falls to go to the eight and ten inch discharge lines leaving that station, and connects them both, so that they discharge into the one ten inch line which continues on north.

Q. What I am trying to get at is——

A. If he asked me if there are any communities in there between these points (ind.), that are served, I will tell him that I don't know of any large communities.

235 Q. What is the next branch line or service line?

A. Above the town of Sherard, which you last referred to, I mentioned the ten inch and the eight inch line in the Triadelphia District, Ohio County.

Q. What communities does that line furnish in West Virginia?

A. That I would be unable to state. You say which line——

Q. Take the ten inch line branching off and running southwardly from a point near Triadelphia, and following it over to the Ohio

River; are there any communities in between that are furnished by that line?

A. No large communities. That large ten inch line you refer to connects with another line which conveys gas to the town of Tiltonville, and Yorkville, Martins Ferry, Bridgeport, Bellaire, all in Ohio.

Q. What about West Virginia towns?

A. That line carries gas to the town of Warwood, to industrial consumers in Wheeling, and conveys gas to Moundsville and Glendale. Now I want to explain: I don't mean to testify that the gas leaving this point of connection supplies or reaches those consumers, because that line in which it is connected continues and is the same line which comes from our Rosbys Rock Compressing Station. So that I wouldn't have any way of determining whether the gas sup-
236 plied to a certain district there—for instance, Moundsville, whether it came from the Rosbys Rock Compressing or whether it came out of our twenty inch line, or whether it came from our Majorsville Station.

Q. Well, putting it in another way, when your gas starts from Rosbys Rock or Porters Falls or the Sedalia Compressing Station, you can't tell where it is going?

A. No, you can't. That is, you can't tell what gas is feeding certain communities, or what gas certain consumers are using, from Porters Falls or any one station.

Q. Do you mean to say that you never do know?

A. There might be incidental times, or occasional times, when you have all your stations down, say, but one, and maybe running only two engines, that you might feel fairly well satisfied in your minds as to where that gas was coming from.

Q. But that would be the exception?

A. That would be the exception. In the ordinary procedure of operating the lines, you wouldn't know. I don't mean to say, Mr. Hoffheimer, that there are not certain towns—the chances are you could guess as to what station the gas is coming from, but no definite knowledge.

Q. Then when your gas goes into the discharge line from the Sedalia Compressing Station, you don't know, and nobody else knows whether it is going to get into West Virginia or Ohio or Pennsylvania?

237 A. I couldn't say that, because at Hundred we had delivered to us a manufactured gas which had an odor, peculiar odor—sulphur. Now, we got that at Steubenville, Ohio, we got it down here at Sewickley, Pennsylvania, and we got it a little out at East Liverpool; some communities it seemed to affect and others it didn't. It might affect one community today, and you might have tests made, and that community would be entirely clear, apparently, from it, and it would show up maybe at some other place.

Now, the reason I couldn't answer your question would be to say yes to it.

Q. That is, you know it will show up at one place from another, but you can't tell in advance where it will be?

A. No, I simply state that some two years ago we had delivered to us some manufactured gas that had a peculiar odor, sulphur; and

that it showed at Steubenville, Ohio, and again it showed at Ambridge, and at Sewickley, in Pennsylvania; it showed at New Castle; but it wasn't a continuous showing. For instance a consumer might complain of the odor in his home, and be looking for a gas leak in his house pipe, and wanting to know what was the matter with his gas, and we would send our man down there, maybe the next day, to take a test, or a sample of the gas for analysis, and perhaps it wouldn't be there that time. It would change about. I don't
238 mean to say that that kept up day after day in those communities. It might show today and not show for two or three days, and might come back again. There was a period I think for about a month that we had that trouble.

Q. Well, to go back, I asked you something about the branch lines, and you gave me the branches through New Martinsville and Sherrard and other places. Are those the only places along your main lines in West Virginia that are supplied by your West Virginia lines?

A. Do you mean they receiving their gas——

Q. Whether they are getting gas from the Manufacturers Light and Heat Company, I don't care where you get it.

A. The connections which I named from Porters Falls on up to Station A are practically all the connections along the ten inch line leading from Porters Falls Compressing Station. There is one connection that is not mentioned, and there is no doubt other connections supplying smaller communities that I would not be aware of, perhaps. I mean by smaller communities, communities of eight or ten houses, small clusters.

Q. Going back again to the Sedalia Compressing Station, and following along your sixteen inch line and your ten inch line: are there any wells feeding into those lines that increase the supply of
239 gas after it has passed through the compressing station?

A. There are a few I believe. Do you mean from the Sedalia Compressing Station, to what point?

Q. Well, take its length, until it reaches the Pennsylvania line?

A. I believe that there are some wells feeding in there; not a great number, however.

Q. How about the line from the Porters Falls Compressing Station?

A. You mean——

Q. Take the ten inch line.

A. You mean relative as to whether or not it has any wells feeding into it?

Q. Yes.

A. I think and I believe that on that ten inch line those wells have all been changed, so that the gas from those wells goes through the Rosbys Rock Compressing Station.

Q. All right, take the Rosbys Rock Compressing Station, the length of the line leading from it. Do any other wells lead in from West Virginia?

A. The gas comes from the field known as the Proctor Field and enters Rosbys Rock. There is also another ten inch line connecting at Rosbys Rock which conveys gas from our Cameron Field. The gas

coming through that ten inch line comes from wells located in
240 the Cameron Field and does not pass through any compressing station until it passes through the Rosbys Rock Compressing Station.

Q. Take the gas coming from the Rosbys Rock Compressing Station and running up toward Benwood does any gas feed into that ten inch line between those two points?

A. You mean on the ten inch discharge line from Rosbys Rock Compressing Station?

Q. Yes.

A. Up to what point?

Q. Take the point from Rosbys Rock along the ten inch line up to Benwood; does any gas feed into that ten inch line from the field?

A. None to my knowledge. That is, that feeds in from local wells.

Q. Yes.

A. None to my knowledge.

Q. Pursue that line further, going up from Benwood, up to Station A Reducing Station. Do any local lines feed into that line?

A. That line doesn't continue from Benwood up to Station A. If you refer to the line which leaves the Rosbys Rock Compressing Station,—the ten inch line leaving Rosbys Rock Compressing
241 Station, as previously stated, passes through the towns of Moundsville and Wheeling, with two or three river lines crossing over into the State of Ohio, and supplies the towns of Bellaire, Bridgeport, and Martins Ferry, Rayland, Yorkville, and Bellaire in Ohio, and is connected with a ten inch line which conveys gas at times from the Majorsville Compressing Station located in Pennsylvania and was connected with the ten inch line which comes from the Porters Falls Compressing Station located in Wetzel County, West Virginia.

Q. Then all of your gas gets through a compressing station at some time, doesn't it?

A. All of our gas?

Q. Yes.

A. Oh, no, no, sir.

Q. If not, why not?

A. We have wells which feed into lines with no compressor stations on them at all.

Q. Where are those places, in West Virginia?

A. Well, Well No. 1073.

Q. That is near Loudenville?

A. I would say south of Loudenville; that is one. As stated, I think that there are a few other wells, but not very many, which feed into the discharge lines leading from the compressing station.

242 Q. Which compressor station?

A. That would be the sixteen inch line coming on up from the Sedalia Compressing Station. Ahead of the Hundred Station I believe there were a few wells which did feed into the discharge line, but I think a change has been made whereby they go into the suction line.

Q. Well, you talk about a discharge line; you mean the trunk line carrying gas from the compressing station?

A. Yes, and then again, as previously stated to you, one of the ten inch lines which enters the Rosbys Rock Station is gas from wells in the Cameron Field, and gas not having passed through any station until it reached the Rosbys Rock Station. Now we have up here near the town of Chester, wells which produce gas which does not pass through a compressing station.

Q. Where does that gas go?

A. That would be pretty hard for me to state. That gas enters three lines which convey gas to the town of Chester, and Newell in West Virginia, and crosses over and supplies the towns of East Liverpool and Wellsville in Ohio, and continues on down and connects with the other lines coming from the Porters Falls Station. We have also near Wellsburg, West Virginia, gas coming into
243 our line on which there is no compressing station. And of course quite a few wells in Pennsylvania that enter into the lines, which does not go through a compressing station.

Q. Your map shows some field lines on the Ohio side of the West Virginia Pan Handle?

A. Yes, sir.

Q. What do those lines indicate, what do they carry?

A. They carry natural gas.

Q. From where?

A. From wells located in Ohio to the lines, main lines, which carry gas for the use of customers in various communities.

Q. The lines in the state of Ohio branching out from the Ohio River are sources of supply to the Manufacturers Light and Heat Company, or means or conveying gas, to Ohio consumers in that territory?

A. They convey the gas produced in Ohio, but as to where it does that I would be unable to answer.

Q. How much gas did the Manufacturers Light and Heat Company supply to Bellaire in 1919, do you know?

A. No, because there are so many communities that I don't attempt to carry any figures of that kind in my mind. I would simply state that I could secure the figures for you and give them to you later if you desire.

244 Q. Take the branch line leading from Richmond, Ohio, and running northeasterly through Knoxville and up to the Ohio River. Do you have any gas in that territory produced by the Manufacturers Light and Heat Company itself?

A. I am rather of the opinion that there are one or two wells that produce gas there yet. I think, or believe, there have been five or six of those wells abandoned, or orders out to abandon them.

Q. What is the production of the wells that are not abandoned?

A. I couldn't tell you that. I can secure it if you desire it. I want to say that it ain't so awful large.

Q. What towns are there along that branch that are supplied by you?

A. The town of Richmond is about the only one—Knoxville. There are consumers along the line—a few.

Q. What town is there at the junction of that branch with the main line running along the Ohio River,—anything.

A. No town at the junction there. There is a small community called Costonia.

Q. In what state?

A. In Ohio.

Q. Take the small line on the Ohio River side, the Chester Reducing Station. Does that line connect with anything?

A. It does.

Q. With what?

245 A. With gas which we purchase in Ohio.

Q. What consumption do you have along that line?

A. Those wells are located practically in the city of East Liverpool, Ohio, and there are some of them in their big park. That line is connected to a line which comes really from the Chester Reducing Station, the gas mixing together.

Q. You don't show the connection here on your map?

A. No, for the simple reason that the city of East Liverpool is there and we have made no attempts to show any lines supplying the city of East Liverpool or any other town on the map. This line here (ind.) you understand, that the gas crosses over the river through these three lines and this fourth river line, and connects into the eight and ten inch line on the Ohio side of the Ohio River. Then there are at various points there high pressure lines which branch off to the streets in the town and conveys that gas to certain plants and localities, at which regulators are set, reducing the pressure to whatever pressure we are delivering gas to the domestic consumer at. Now that line continues right up to the top of the hill and connects in with this (ind.).

Q. Then if I get you correctly, the small four inch line on the Ohio side running up through the town of East Liverpool,—the gas from that line passes through the distribution system

246 in the town of East Liverpool?

A. I wouldn't care to say that it passes through the distribution system. It isconnected with the high pressure linewhich is connected to the Chester Reducing Station which you refer to on the West Virginia side of the river. That gas is then by means of regulator—the pressure is reduced at various points throughout the city to what we style low pressure, and then goes into the distributing line which goes to the consumer.

Q. Do you mean to say that the gas from that four inch line circles around the city of East Liverpool to get across the river to the Chester Reducing Station before it can possibly get back to the City of East Liverpool?

A. No, I have no recollection of saying anything of the kind. I simply stated that the line which conveys gas from those wells is connected to the same high pressure lines, which come from the Chester Reducing Station; and at various points throughout the city of East Liverpool regulators are set which reduce the pressure in that line to low pressure, the pressure at which we deliver the gas to the consumer. In other words, if you want me to put it plain to you, I can by making a direct manipulation, send that gas from those wells over and feed consumers in the town of Chester, West

Virginia. The lines are connected in that manner. As to
247 whether or not the gas does go from those wells to Chester in West Virginia I wouldn't want to say.

Q. You wouldn't want to say that of any of the gas, would you?

A. I have told you I think four or five times that I am absolutely unable to state where any of that gas goes to, or where each gas or any particular gas—which point it comes from.

Q. Take the two inch line on the Ohio side running up to Steubenville. How many wells do you have along that line?

A. I think there are two wells in that Brilliant field. Now it is very possible that one of those wells has been pulled by this time, but I think both of them are still producing gas, although there is an order out for the abandonment of one.

Q. What would be the maximum gas production of those wells?

A. That is very small. As a matter of fact we pulled it because of its small production.

Q. Would those wells together make a million feet a day?

A. Oh, no. If they did, I don't think I would be at all justified in abandoning them. I would say that they make a matter of a few thousand feet a day.

Q. What line does that two inch line feed into?

A. You mean the two inch line coming from those wells?

248 Q. Yes.

A. Now if you are under the impression that this two inch line there shown on the map near the dividing line of Wells Township and Cross Creek Township—those two wells I don't believe feed into that line. That two inch line which you refer to supplies gas to a little community*b* called West Alexander.

Q. What becomes of the gas from those two wells—what does it feed into?

A. It feeds into the main line right below Brilliant here, right here (ind.) It feeds into our six and eight inch line from Wells Township, Jefferson County.

Q. What is the nearest community supplied there on the Ohio side?

A. Brilliant, Ohio.

Q. How big a place is that?

A. Oh, I imagine that in Brilliant we have perhaps—Oh, I would say a thousand customers.

Mr. Weil:

Q. You mean a thousand consumers?

A. A thousand consumers. Now, that might be two or three hundred consumers off. Now, wait a minute—Brilliant I will give you exactly, practicaly exactly what we have got. We have got about three hundred and twenty-five in Brilliant. I had in mind
249 Mingo Junction, another town close by, or three or four miles away.

Mr. Hoffheimer:

Q. How many consumers do you have in Steubenville?
A. That I would be unable to answer definitely. I think approximately about six thousand right in the town of Steubenville. In the whole district known as the Steubenville District, there is somewhere, in all, twelve thousand. That includes West Virginia consumers, and includes several towns up and down the river from Steubenville.
Q. You gave us a distance here the other day of 167.8 miles from the Sedalia Compressing Station up to Mercer County, Pennsylvania?
A. I have no recollection of saying that. I said from the most southern point on our pipe line system south of Sedalia Station to the most northern point of the pipe line system in Venango County, Pennsylvania, was one hundred and sixty-seven, or 168.7 miles.
Q. All right, with that qualification; were you intending to say that the gas from your most southerly portion of your pipe line system got up to the most northerly portion?
A. No.
Q. Whatever the distance may be?
A. No, I had no thought of that at the time the question
250 was answered. It was simply the length of our pipe line.
Q. So far as the northerly part of your system is concerned, you can't tell whether it is West Virginia gas or whether it is Pennsylvania gas, can you?
A. I can tell you at the present time.
Q. What is the fact at the present time?
A. The absolute farthest north point at this time is Pennsylvania gas.

Mr. Weil:

Q. Tell us why, so as to save time.
A. We have a field located near the most northern point from which we secure gas. The gathering lines and main line from that field enters the city of New Castle. In times such as today, why there is perhaps very little gas coming from that field into New Castle. Consequently any customers which would be at that extreme northern point would be using gas produced from wells in that district at this particular time.

Mr. Hoffheimer:

Q. Let us travel back towards the Sedalia Compressing Station again, and that sixteen inch line. When was that sixteen inch line leading out of the Sedalia Compressing Station built?
251 A. From the history of the company, as I have it, in the year 1903 or 1904, or perhaps both of those years. That is, you refer to the sixteen inch line from Sedalia on through into the twenty inch?
Q. Yes.

A. Yes, sir.

Q. By what company was that sixteen inch line carried on the books?

A. I believe that that line was built and constructed by the Manufacturers Light and Heat Company.

Q. You say you believe that?

A. That is the history of the company as I have it.

Q. Now as a matter of fact, wasn't that sixteen inch line built by the Wheeling Natural Gas Company, and the title to it carried in the name of the Wheeling Natural Gas Company in 1902 or 1903?

A. The history of the company as I have it is that that sixteen inch line coming from the Sedalia station and connecting with our twenty inch main line was built and constructed and paid for by the Manufacturers Company.

Mr. Weil:

Q. That is, the Manufacturers Light and Heat Company?

A. By the Manufacturers Light and Heat Company.

252 Mr. Hoffheimer:

Q. In the same way that the Wheeling Natural Gas Company's property was taken over by the Manufacturers Light and Heat Company in 1902 or 1903?

Mr. Weil: I object to that question as not being one to which the witness can give an intelligent answer.

The Commissioner: Note the objection.

The Witness: Do you refer, by your question, as to what manner it was paid for.

Mr. Hoffheimer:

Q. I don't care how it was paid for. I am trying to find out who built it and who owned that pipe line.

A. As stated twice previously, the history of the company as I have it, is that the pipe line was built and constructed by the Manufacturers Light and Heat Company.

Q. Where do you get that history?

A. Well, I have picked it up in the ten years, nine or ten years, that I have been with the company; principally some three or four years ago, or five years ago, the time that our company was in litigation with the state of West Virginia relative to rates. At that
253 time a great portion of the history of the company was talked at different times, and I was fortunate enough, or unfortunate enough, to be present quite a few times when these talks were being had, and I sat quiet and absorbed as much of it as my memory would permit me to retain.

Q. Well, the records of your company will show?

A. As previously stated, I can't tell you what the records of the company show, because I never had anything to do with the making of them up. In fact I never looked at them.

Q. Take the line leading from the Porters Falls Compressing Station: who built that?
A. You refer to both lines I presume.
Q. Yes.
A. I believe the Tri State Gas Company built those lines. My reasons for saying so are that that was kind of designated as the Tri State line.
Q. When were those lines built?
A. I would be unable to answer the time.
Q. Take the line leading north from the Rosbys Rock Compressing Station; by whom was that built?
A. I have every reason——

Mr. Weil: Give the size of it.
Mr. Hoffheimer: Ten inch.

54 A. I believe that was built by the Wheeling Natural Gas Company.

Mr. Hoffheimer:

Q. Where did the line of the Wheeling Natural Gas Company start?
A. That I would be unable to answer.
Q. Do you know whether the Wheeling Natural Gas Company had any line owned by it south of the Rosbys Rock Station?
A. Any more than the history of the company as I have it is that they were operating in the Proctor Field. The Proctor Field, you will notice, is south of the Rosbys Rock Compressing Station. I take it that they conveyed that gas from their field to their ten inch line and on up to the market there at Moundsville. McMechen, and Wheeling, and to the towns which they supplied in Ohio.
Q. Isn't it a fact that the Wheeling Natural Gas Company did build lines into the Sedalia Field, or that territory around the Sedalia Compressing Station?
A. Not to my knowledge. Now they might have, Mr. Hoffheimer. Not to my knowledge.
Q. Did the Wheeling Natural Gas Company build any trunk line or main pipe line south or southeast of the Sedalia Compressing Station at any time?

55 A. There was a line which the Company owned which ran south from the Sedalia Station. As to who built that line, I would be unable to say. It is a line that the Company has not owned for some time. I don't know the history of it.
Q. Why is that line not laid down on your map?
A. The map as made there only shows the lines which the Manufacturers Light and Heat Company own.
Q. What became of the line southeast of Sedalia which was built?
A. The history of the company as I have it is that that line was sold.
Q. To whom?
A. I believe to the Hope Natural Gas Company.

Q. How long a line was that?
A. That I am not in position to answer, I don't know.
Q. When was it sold?
A. It would be guess work on my part to state the year. I would say 1909 or 1910, or somewhere in that neighborhood.
Q. How long a line was it?
A. That I am unable to answer.
Q. Where did it start and where did it end?
A. I couldn't tell you where it started. I- ended at a point near our Sedalia Compressing Station in Doddridge County, West Virginia.
Q. By whom is that line used at the present time?
A. I have no direct knowledge as to who is using that line.
256 I presume, however, that if the Hope purchased it they are using it, although I would be unable to state whether they are or not.
Q. What other companies are operating in the Pan Handle of West Virginia besides the Manufacturers Light and Heat Company?
A. The Natural Gas Company of West Virginia supply gas to domestic consumers, and I believe to some industrial consumers, in the city of Wheeling, West Virginia, and also at Benwood, West Virginia. As to whether or not the gas which they sell there comes from any operation which they have in West Virginia, I would be unable to state. I believe not.
Q. Well, aside from the Manufacturers Light and Heat Company, is there any gas company operating in Northern West Virginia whose lines cross and recross the three states in the same way that the Manufacturers Light and Heat Company's do?
A. No, sir.
Q. What company?
A. I said no, sir.
Q. The fact is that the lay-out and structure of the lines of the Manufacturers Light and Heat Company are exceptional so far as that feature is concerned?
A. No, I believe that there are other companies, perhaps,
257 that cross and recross the state lines.
Q. Do you know of any other company whose lines cross or recross forty-three different times, as you expressed it here the other day?
A. As to the number of times which their lines cross and recross, I would be unable to answer. I simply stated in my answer that I know of companies which cross the state line.
Q. What other companies do you know of that cross the state line in the Pan Handle?
A. None in the Pan Handle District. I thought you had in mind any companies operating in the state of West Virginia.
Q. No, I refer to the Pan Handle District particularly.
A. None in the Pan Handle District.
Q. And the reason for that is that the Manufacturers has more lines than any other company in the Pan Handle, and the Pan Handle happens to be a pretty narrow strip of territory?

A. No.

Q. Is that the situation?

A. No, I wouldn't want to say that. The condition is perhaps due to the fact that nature provided the Ohio River, and when a dividing line was chosen dividing the territory and forming the states of West Virginia and Ohio, they used the Ohio River as a portion of
258 their boundary line; and the communities along that river are the communities which are served from the lines of the Manufacturers Company. At various points, perhaps at one time on the Ohio side would be the larger community. Further along, perhaps, the larger community would be on the West Virginia side; and that would account for the recrossing and crossing of the lines between the states of West Virginia and Ohio. As to the lines crossing and recrossing the state line between the state of West Virginia and Pennsylvania, we have our field from which a portion of our gas is produced which lies in the territory and the state line passes through that field. Naturally we have lines on each side of the state line, and that would account for the lines recrossing and crossing.

Q. But at any rate, without holding you responsible for the boundary lines between the states, or the existence of the Ohio River, your condition in the Pan Handle there is different from that of any other company in the respects you have indicated?

A. Operating in the Pan Handle?

Q. Yes.

A. In the Pan Handle District our condition would be different from any other company which might be operating there.

Q. You had something to say the other day about the amount of money invested by the Manufacturers Light and Heat Com-
259 pany in West Virginia, and gave what figure?

A. Invested?

Q. Yes.

A. I believe that I stated that we had invested in the state of West Virginia approximately six million of dollars. That we had returned our property in the state—or that value on our property in the state. That the value placed upon it by the state was that of ten million of dollars.

Q. You also stated that the company had expended something like thirty million dollars in the state?

A. That was my estimate as to the total amount of money which the company had spent in West Virginia.

Q. Now you included in that thirty million dollars your expenditures for leases, rentals, drilling wells, and all such items?

A. I included, or intended to include, in that estimate, every cent of money expended by the company in the state of West Virginia. That was an estimate.

Q. Whether it came under the head of capital investment or whether as operating expense?

A. The question asked me was as to how much money my company had expended in the state of West Virginia.

Q. When you undertook to give the figures of the millions and

tens of millions of dollars as spent by other companies in West Virginia, you also were including the money spent for leases,
260 rentals and royalties, and the drilling of wells and that sort of thing?

A. The question asked me I believe was as to how much money had been spent by all the companies in the state of West Virginia.

Q. Were you counting the capital investment or total expenditures?

A. I simply answered the question as I took the question to mean, the total amount of money which the company had expended in the state for any purpose, Mr. Hoffheimer.

Q. And that statement was a mere estimate on your part?

A. As stated to you it was an estimate, yes, sir.

Q. You don't pretend to have any accurate information on the subject?

A. No, that would necessitate a great deal of detail work in getting it up. We could arrive at that. I think I could easily arrive at and verify the thirty million which I have stated; that is by taking certain expenditures during the past ten years. I am very near inclined to the belief that I would have no trouble in showing that quite a bit of that thirty million dollars has been expended in the last nine years, and from the amount of money which we have expended, I believe that I could materially increase my estimate at this time.

Q. All right, without going into any question of accounts,
261 or accounting, or anything of that kind, it is true that the Manufacturers Light and Heat Company has charged up to operating expenses, throughout its career as you have known it, the rentals paid on its leases, bonuses paid for leases, the cost of drilling wells, and items of that character?

A. No, I wouldn't want to say that, Mr. Hoffheimer.

Q. Why would you not say it?

A. I would say that rentals and royalties paid has been charged to expense, I believe. There has been certain expense in connection with drilling charged to expense account. But there is also a part of the money paid out in drilling, which went into investment. Any extensions of lines, new lines laid, gathering lines laid from the wells to the other gathering lines leading to the stations or to the consumers, that is not charged as expense.

Q. I wasn't asking you about pipe lines or gathering lines. I am asking you about——

A. You mentioned drilling wells, Mr. Hoffheimer. That I would say, as stated, a portion of the money expended in drilling wells was charged to expense and the balance to capital, capital account.

Q. Now about your bonuses for leases and rentals paid to the farmers?

A. I believe that is charged to expense.

Here a recess was taken until 1:30 o'clock P. M.

262 Tuesday Afternoon.

And now, the hour of 1:30 o'clock P. M. having arrived, hearing resumed pursuant to adjournment.

H. A. QUAY resumes stand.

Cross-examination (continued).

Mr. Hoffheimer:

Q. You gave us yesterday, Mr. Quay, some figures of gas production, purchase and consumption on your system. Among those items was gas sold for field purposes. What did you mean to include in that item?

A. I believe that under the head of field gas is included any gas used in the field for the purposes of drilling, cleaning out or pumping,—gas engine use, for instance.

Q. Gas used by the Manufacturers Light & Heat Company or its contractors?

A. No, I rather think,—well, field purposes would be in that perhaps, yes, sir. I would not want to say that all the gas used by the Manufacturers Light & Heat Company is included in that classification. Any gas used for their own drilling purposes or field purposes is probably included in those figures.

Q. You gave us a heading of "Miscellaneous Uses." What did you include, in a general way, in that?

263 A. In a general way, gas sold to churches and schools, to our own compressing stations, gas for street lighting purposes, are entered under the head of Miscellaneous Gas.

Q. Is there anything besides churches and schools in the way of public institutions entering into that heading?

A. I am not absolutely certain about that. I don't believe any public institutions would be included in that "Miscellaneous." By "public institutions" I mean Government buildings, or buildings of that kind,—or for their use.

Q. Such as a courthouse or city hall or a hospital or asylum, or something of that kind?

A. There are possibly some hospitals where they would be getting some special rate, a rate different than the domestic rate; and there is in "Miscellaneous," I believe, some gas furnished, for instance, as part payment for a right-of-way; that is, where the consideration for the right-of-way, or part of the consideration at least, was the furnishing of gas at a lesser rate than the rate sold to the domestic consumer. Those contracts are agreements made years ago. I believe that gas was under the heading "Miscellaneous Gas."

Q. Well, in the same way, would that item include the free gas to the farmer, under your leases?

A. No, the figures I gave yesterday do not take into con-
264 sideration any gas given away free to the land owner.

Q. You spoke of public institutions and, I believe, in some instances, the supply of gas to the United States Government, under

contracts, being included; I assume they are in the "Miscellaneous" or the "Public Institutions" headings?

A. Yes, I would say that under "Public Institutions" there would be—that would include perhaps institutions like the Moundsville Penitentiary, in West Virginia, and the Morganza, a reform school operated by the State of Pennsylvania, and probably some postoffice buildings. It might include Government dams; I think we have seventeen contracts with the United States Government for supplying gas to their dams. I am not certain whether that gas is listed under "Public Institutions" or not; I am rather doubtful about that.

Q. What is the general nature of those contracts?

A. In what respect?

Q. Are they special written contracts, or are they merely classifications under your schedules of rates filed with the Public Service Commissions or Public Utility Commissions of the States?

A. We have contracts for all gas furnished on agreements. The only agreements that we have for the sale of gas is a few which I have already stated were agreements covering rights-of-
265 way.

Q. Covering what?

A. Rights-of-way, in which a certain price per thousand cubic feet was given as a consideration for the rights-of-way. We have a contract direct——

Mr. Weil:

Q. You don't mean rights-of-way, do you? You mean franchises in towns?

A. No, rights-of-way across the farmers' land.

Q. Oh, yes, I understand.

A. With the United States Government we have separate contracts covering every individual point which we deliver gas to, including their postoffices. They submit their contracts once each year. The gas supplied to the United States Government in their dams the contract is not submitted each year; they are on another form of contract, the Company's regular form.

Mr. Hoffheimer:

Q. Renewed how often?

A. Whenever there is an increase in rate, new contracts are submitted to the United States Government for the gas furnished to them at the dams.

266 Q. What are your rates?

A. At the Bureau of Mines we also furnish the United States Government a supply of gas, in the Department of Interior Bureau of Mines.

Mr. Weil:

Q. Where?

A. That is out here——

Q. You mean in Pittsburgh?

A. No, out from Pittsburgh here, at a place called Cliff Mine, I think, ten or twelve miles from Pittsburgh. That gas—or those contracts formerly were submitted each year; at the present time, a new contract is entered into with the United States Government for that gas only in the event that the rate is changed.

Mr. Hoffheimer:

Q. In other words, whenever your general rates are changed, you conform the rates to the Federal Government to your changes, and the object of making a new contract is to provide some written evidence of your agreement in accordance with the requirements of the Federal Government?

A. No, I would not want to say that.

Q. What do you want to say?

267 A. I would say—or I wouldn't want to say that we change the rates, or make the same rates to the Government as we do to some other people. That is, for instance, in the Government Postoffice, the gas furnished them is a net price, without any discount provisions in the contract. I would not want to say that each time we increase the price of gas to other consumers we increase the price to the United States Government, because it wouldn't be so. But whenever the price is increased to the Government, then a new contract is negotiated.

Q. Well, aside from those Postoffice contracts, which I understand to be renewed from year to year, what is the term of the other Federal Government contracts?

A. The term is for a term of thirty days, and as much longer thereafter as mutually agreed to, subject to termination on thirty days' written notice by either party. I might say that we attempted to restrict the supply of gas furnished to the United States Government, and have taken the matter up through their engineers, and they objected very strenuously to us not furnishing the gas to them at all times, inasmuch as the gas is used for gas engines, and their locks are operated through compressed air; and when the boats go up and down the river, it is necessary to have this gas to operate these dams and permit the boats to go up and down the river.

268 Those we furnish are constructed for the use of gas and gas engines; and at that time we were operating under a license issued by the United States Fuel Administrator, and we complied with their request and did not curtail or restrict the supply furnished the United States Government.

Q. In other words, you were trying to put the Government, for purposes of restriction, on a basis somewhat similar to that of industrial consumers?

A. We try to treat all of our customers alike, show no preference.

Q. That was the basis on which you tried to put the Government?

A. Yes.

Q. And during the period of the war——

A. No, at times when the supply was needed by the domestic consumer, we attempted to restrict the gas furnished them the same as any other consumer other than domestic consumer.

Q. Well, leaving the United States Government, or anything which pertains to it, and turning to State and Municipal institutions, you supply to such institutions both in West Virginia and Pennsylvania and Ohio, do you?

A. We supply State institutions in the States of West Virginia and Pennsylvania. I can't offhand remember any State in-
269 stitution which we supply in Ohio. And we supply the various municipalities in the three States, and in some instances County institutions.

Q. Well, without getting down to details, what I meant to inquire about was this: The character of the State institutions and the institutions of Government sub-divisions in West Virginia and Pennsylvania—eliminating Ohio—are of very much the same character, and—leaving out any question of rates—very much on the same basis?

A. As to supply, yes; as to contracts, yes. They all have contracts.

Q. Without pinning you down to any exact figures, what was the number of your consumers in Pennsylvania in 1919?

Mr. Weil: Do you mean all kinds, or municipal?

Mr. Hoffheimer: I will ask him separately.

A. If I recollect correctly, I testified on the first or second day of the hearing that we have approximately 75,000 customers in the State of Pennsylvania.

Q. That included domestic and industrial?

A. Oh, yes; approximately 75,000.

Q. How many did you have in West Virginia?

270 A. Approximately 11,000.

Q. And Ohio?

A. Approximately 26,000.

Q. And what was the number of your consumers in Pennsylvania in 1918?

A. That I would be unable to answer. We had a total increase during the year 1919 of 3,900 customers.

Q. In Pennsylvania?

A. No, in all three States.

Q. And are you able to give us any figures of the same nature as to 1918, 1917, and previous years?

A. As to gain in consumers?

Q. Yes.

A. The gain in 1918, I believe, ran approximately 4,200; I might be off a hundred or so, a little, along there. I believe the year before that, somewhere around 4,500. Now, those are not intended to be exact figures. I can secure the exact figures for you, if you desire.

Q. Where were those consumers or customers principally located?

A. There would be no way that I have right offhand of telling where the majority of them were located.

Q. How?

A. There would be no way that I have to determine that, without going and securing the data for you.

271 Q. Your books would show?

A. Yes. I can give you certain localities that I have reasons for them being fresh in my memory. For instance, Weirton, West Virginia, and below Weirton, West Virginia, close to Wellsburg there, at the new electric plant; and various communities. We made quite a large increase in the last three or four years in the number of consumers. As I said, during the war we had an application to supply gas to some five thousand homes in a plan which the Government was going to erect, a housing program, which the Company refused to supply with gas. They were to be located in the State of Pennsylvania.

Q. I believe I will ask you if you will supply, in connection with your examination, your figures for the years 1910 to 1919 inclusive, as to the number of consumers in the three States of Pennsylvania, Ohio and West Virginia; can you furnish that?

A. Do you mean the number of new consumers added each year?

Q. Well, if you give us the total number of consumers, it will show that of itself.

A. I believe we can furnish that information.

Q. We want that divided into domestic and industrial,—and I suppose your other classifications will hold, too?

A. To work out and furnish you an itemized statement as
272 to the number of accounts in each of those various classifications, that would be some work.

Q. You mean, as to your miscellaneous items?

A. Yes, and various items.—If we would class them as Industrial, Domestic and Miscellaneous.

Q. Well, suppose you do that. I don't care about sub-divisions.

A. Now, in connection with that, you asked for the number of domestic and industrial consumers?

Q. And a third class of Miscellaneous.

A. The way, I believe, that they are accounted for, industrial consumers particularly, is the styling of each meter as an industrial account, whereas under one contract we might have ten or fifteen meters. Do you mean the number of meters or the contracts that we have?

Q. When you gave Mr. Weil some figures as of December 31st, 1919, I believe you styled it as the number entering into your income account as of December 31st, 1919.

A. Yes, accounts which showed an earning.

Q. Use the same basis on which you gave Mr. Weil those figures.

A. Very well.

Q. When did you withdraw your industrial schedules in Pennsylvania and Ohio?

A. I believe that was in the year,—I don't know—it was
273 along about 1915 or '16, I believe.

Mr. Weil:

Q. It was more than that.

A. It might have been '17.

Q. I think it was '18.

A. I really don't know, Mr. Hoffheimer. At the same time they were withdrawn in the State of West Virginia.

Mr. Hoffheimer:

Q. You mean by "withdrawn," that you no longer embraced the supply of industrial gas in your schedules filed with the Public Service or Public Utility Commissions of the two States?

A. I mean by that that the gas which we have for sale to the industrial consumer is simply the surplus gas remaining after the requirements of the domestic consumer have been taken care of. The only gas that we have for sale to the industrial consumer is the surplus gas remaining after the full requirements of the domestic consumer have been taken care of.

Q. That doesn't quite answer my question. I am trying to find out what you mean by "withdrawing industrial service?"

A. We no longer hold ourselves out as being able to furnish that service.

274 Q. The fact is that from 1915 up to the present time you have supplied gas to industrial consumers in very considerable quantities?

A. The year 1915, I presume you mention that date as the date which we withdrew our industrial schedules?

Q. Yes, if that is the right year.

A. Now, if that is the right year, I said I didn't know the exact year. I can secure the exact date, if you wish; but I would say that we have at all times sold some gas for industrial use.

Q. The fact about it is that there are certain periods of the year when you have a very large surplus of gas, which you must sell to industrial consumers or not sell at all?

A. No, I wouldn't want to say that, Mr. Hoffheimer. We purchase large amounts of gas from one company, an amount equal to our domestic sales. The delivery of that gas is based on the time of year, and the amount varies according to the period of the year and the amount consumed by our domestic consumers for that particular time the year before. So that we are practically as short of gas in the summer time as we are in winter time, though we can purchase more gas, or there is more gas available for purchase in the wummer time than there is in the winter time, and the temperature running more even permits us to use our own gas surplus more for industrial use than for domestic use.

275 Q. So that the amount of gas you sell for industrial purposes at any time is merely the unanticipated surplus which you have after supplying your domestic consumption?

A. The gas sold to the industrial consumer is the surplus gas remaining after the requirements of the domestic consumer have been taken care of, yes, sir.

Q. That is where you got the 5,757,134,000 cubic feet of gas you sold to industrial consumers in Pennsylvania in 1919?

A. If those figures are stated correctly—and I presume they are—

that would be sales, gas we had available which would not be required at that particular time by the domestic consumer.

Q. And the amount of that gas you cannot foresee?

A. The amount of which gas do you refer to?

Q. The industrial gas.

A. As to their requirements? No, we would be unable to foresee that. That is, we know approximately their demand, but as to the amount available for their use, that would depend entirely on the amount of gas required by the domestic consumer.

Q. And the same would apply to the supply of industrial gas into Ohio and West Virginia?

A. The same condition would apply to any gas sold by this
276 company for industrial use; the gas furnished them has been the gas we have had in excess of the requirements of the domestic consumer.

Q. How do you sell that industrial gas in Pennsylvania,—under contract or under a Public Service schedule?

A. We sell industrial gas in Pennsylvania under contract.

Q. I know, but by particular written contracts in each instance?

A. By individual particular contracts in each instance.

Q. I wish that, when you bring us the information as to the number of consumers, you would refresh your recollection so as to tell us when you did actually withdraw your industrial schedule of rates in Pennsylvania and Ohio?

A. Very well.

Q. What did you mean when you referred to industrial requirements in West Virginia? What is your definition of the word "requirements"?

A. The requirements of the industrial consumer, I consider, is the amount of gas which an industrial consumer might desire to use.

Q. Under what conditions?

A. Under any conditions which he desired to use the gas.

Q. That would take into consideration what elements?

A. That would take into consideration simply what the consumer desired to use,—if he desired to use gas throughout
277 his entire plant, he would state to me that that was his requirements. Now, if he preferred to use some other fuel in a portion of his plant, and did not desire to use the gas there, he would state that so much, so many millions or so many thousands of feet was his requirements.

Q. By "requirements" you had in mind the use of all the gas which his factory or plant would consume provided he had a full supply?

A. In most instances, that would be correct. It would be the amount of gas which the customer might desire to use, and would use if he could secure it.

Q. That would be requirements, without any question of price or availability?

A. He might, and there ofttimes have been periods or times when he has wanted and desired more gas than was available for his use. The question of rates he never gave very much thought,—

that is, only in a general way, because as an ordinary thing, the rates have been very cheap, I think, and we find no difficulty in making contracts at the present rates for the sale of all surplus gas we have.

Q. What I am getting at is this: When you spoke of requirements, you had in mind that he would use in his plant gas exclusively as a fuel?

278 A. As a general proposition, yes, sir,—any gas that he might desire to use.

Q. Well, what do you know about his desires?

A. Well, sir, ever since the time when we withdrew our classification, it has been necessary for each consumer desiring to use gas to fill out and file with us a written application, upon which he states the various subjects in his plant in which he desires to use gas for fuel, and further furnishes us with his requirements—the maximum amount of gas that he might desire, and he also furnishes us with a minimum amount, by the day and for the month, also as to the hours of the day, or the hours through the day which his plant operates. On this application he gives us that information. In addition, he furnishes us with information as to the various subjects in his plants in which he has substitute fuel, those that he has any substitute fuel. We have those on file. I think, approximately, there have been three applications from time to time, from each customer.

Q. When you refer to "requirements," then, you take those maximum amounts and call those requirements?

A. You mean for the purposes of estimating as to the amount of gas which might be sold in West Virginia or any other State?

Q. I am talking about your reference to requirements of industrial consumers.

279 A. I took into consideration those applications, yes, sir, practically entirely, plus previous consumptions. There were a few who could not give, hadn't the data available as to their full requirements; we took a combination of both.

Q. It is, nevertheless, true that a very considerable number of industries or manufacturers in West Virginia have installed apparatus for the production of producer gas?

A. There are customers in West Virginia who have producer plants, yes, sir.

Q. There are a number of them who use coal for the purposes to which coal is applicable?

A. There are customers,—consumers in West Virginia who are using coal some places.

Q. Are they the same people, or some of the same people, to whose requirements you have referred?

A. They would be, yes, sir.

Q Where did you get those figures of 25— to 33,000,000 feet a day as the requirements?

A. As previously stated to you, that estimate was arrived at by taking the individual applications of the customers in West Vir-

ginia plus, in some instances, the previous consumption of those customers, or a certain portion of them.

Q. Well, which did you employ,—their statement of the
280 amount they desired or your conception of what they had used?

A. As previously stated to you, we took the amount stated in the application plus, in some instances, the amount of gas which they had consumed. If you recollect, I stated that some of them were unable to state their full requirements.

Q. What is the line pressure in your main or trunk lines ahead (?) of your various compressing stations in West Virginia?

A. That varies. If you desire the maximum pressure, I would state that we do not leave our pressure exceed 300 pounds, if we can reach that point. That is, we consider that it is not safe to operate the station at a greater pressure than 300 pounds. That is, if you refer to some of the stations in West Virginia.

Q. Let us take those first. You give us 300 pounds maximum?

A. A maximum pressure of 300 pounds.

Q. And what is the minimum?

A. That, of course, varies and depends entirely on conditions.

Q. Well, during how much of the year do you keep running at 300 pounds?

A. I would say that would be merely a matter of guess; I would say rarely at 300 pounds.

Q. I suppose that the greatest pressure comes in the winter time when you carry the peak load?

281 A. What pressure do you refer to, the discharge pressure?

Q. Yes, sir, the pressure which enters your compressing stations.

A. No, I wouldn't want to say that. We attempt to carry full pressures in winter time, but we are not always in position to do that. Now, in summer time, there might be a sudden falling off in the demand for gas,—take, for instance, on a Saturday afternoon—and our pressures sometimes gets up, before we shut down stations, gets up to the danger line, 300 pounds.

Q. All right, suppose you try it this way: Can you give us an average?

A. No, it varies so, depending entirely on the demand for gas and the amount of gas available.

Q. How about your Pennsylvania compressor stations, do the same statements apply?

A. No. Take the Majorsville compressing station, the same statements would apply; if you take the Waynesburg compressing station, Greene County, the point of safety is about 135 pounds, the maximum.

Q. Are there any other Pennsylvania compressor stations?

A. Yes, the station known as the Slippery Rock compressor station; really, 50 to 55 pounds is the maximum there; that is as high as we go.

Q. How about the State of Ohio, have you any compressor stations there?

282 A. We have no compressing stations in the State of Ohio.

Q. All these pressures you have been talking about in answer to my questions relate to your discharge line pressures,—that is, the pressures in the lines after the gas has come through the compressing station?

A. Immediately after leaving the compressors.

Q. With regard to this peak load, is your problem any different in Pennsylvania than it is in West Virginia?

A. Yes. You mean, or do you refer to the problem of furnishing them a full and ample supply?

Q. I mean this: You do have to provide, or attempt to provide, for a peak load in West Virginia as well as in Pennsylvania?

A. All consumers connected to our system burning gas create the peak load. The customers don't necessarily have to be located in any one particular State, or any one community, to cause a peak load. It is the use of gas by all of your customers which creates the peak load.

Q. But if your consumption and production were entirely confined to Pennsylvania, you would still have a peak load to take care of, wouldn't you?

A. We would.

Q. And if your consumption and production were located in West Virginia, you would still have a peak load to take care of?

A. We would.

283 Q. That always has been the condition of the natural gas industry, and always will be?

A. Unless the consumption is restricted in some manner.

Q. Suppose you didn't have a compressor station, how far would the gas travel in a 16-inch line?

A. There would be so many conditions entering into that that I would be unable to answer; it would be absolutely a mere guess on my part. It would depend entirely on the amount of gas you had available and the demand for that gas.

Q. Well, take present conditions. If you did not have today any compressor stations,—or on January 1st, or any arbitrary date?

A. I would be unable to answer that question; absolutely it would be the wildest mere guess on my part.

Q. Your original transportation was without compressors, was it not?

A. Well, I believe so. Inasmuch as I was not connected with the company in its early operations, I would not want to say definitely, but I believe it was.

Q. But it is a fact that, in order to get your gas anywhere now, transported any practicable distance, you regars the compressor stations as necessary?

A. They are necessary to the successful operation of your plant.

Q. You couldn't get your gas far enough away to do any
284 good without them?

A. I wouldn't want to say that. That, as I stated, would depend entirely on conditions.

Q. What conditions do you take into consideration?

A. The amount of gas available that you have, and the demand for that gas.

Q. Well, take your average demand at the present season of the year, how far would your gas get without the compressors?

A. It would be the wildest guess on my part to attempt to state how far that gas would go.

Q. That would apply to any other season of the year as well?

A. Now, understand me: I don't mean to say that if the compressor stations were shut down, that our lines would not have gas in them. I mean to say that the amount of gas transported through these lines, and available for use to consumers, would not be as great as if compressing stations were used. Now, in winter time, when there is a heavy demand for gas, without compressing stations there would be many localities that would be short, would not have sufficient gas, more particularly if there was a large demand for it some place else that would take the gas.

Q. How constantly do you have to operate your compressing stations?

A. That varies. There have been times when it has only been necessary for us to run three engines of all the company has,
285 and there have been other times when they ran every engine, yet did not have sufficient gas.

Q. When were the times when it was not necessary to run all of them?

A. Oh, to give you the exact dates, I don't know. I think last Sunday, if my recollection is correct, we only operated three engines last Sunday.

Q. Where were they?

A. One at Sedalia, one at Hundred and one at Porters Falls.

Q. Those were all that were operated under your whole system?

A. I believe so, yes, sir.

Q. Do you remember any other time?

A. Oh, yes, I could furnish you,—if you desire, I could furnish you various dates, by looking up the record. That is something that I do not attempt to retain in my memory; in fact, I only look at the pressure sheet perhaps once or twice ordinarily through the day, unless there is an emergency, then I pay close attention to it. In other words, the details of that pressure record is in the care of another party, that is part of his duties.

Q. Well, how many days out of a year, do you suppose any of your compressors would be out of operation?

A. I would be unable to state that with any degree of accuracy, because it would be the merest guess on my part, without
286 studying the situation more.

Q. How long has it been since your Porters Falls station has been out of operation?

A. You mean by that all of them—have it entirely shut down, do you mean?

Q. No, the Porters Falls compressor station.

A. I suppose there is one engine shut down at Porters Falls this morning; that is my recollection, on quickly looking at the com-

pressing sheet this morning,—only one engine running at Porters Falls today.

Q. Before this morning, how long has it been out of operation?

A. Of course, I am giving you my recollection, inasmuch as I only casually look at the sheet; I would say that for the last four or five days there has been one engine shut down, only one running in the course of the twenty-four hours. Now, I don't know if it was shut down the whole twenty-four hours; maybe it would be shut down at night and started up some time through the next day.

Q. What about the Sedalia?

A. The Sedalia, the same conditions perhaps prevailed there at Sedalia.

Q. How about the Hundred station?

A. Same conditions. I would say this: That those at Hundred and Sedalia would be shut down prior to all the engines be-
287 ing shut down at Porters Falls, as a general practice. If the information is at all valuable to you—as I stated, that is the merest guess on my part—if you consider it of any value, I will look into it further and give you a more intelligent answer, if you desire.

Q. Well, you can and do shut those stations down partly?

A. Partly. By "partly," you mean shut down certain units in the station?

Q. Yes, sir.

A. Yes, sir.

Q. You spoke of the Porters Falls station being shut down this morning; do you mean that that plant was entirely out of operation?

A. Oh, no; one engine running.

Q. And in the same way, you refer to the Hundred and the Sedalia stations?

A. There would be one engine running.

Q. One or more units being out of operation, and others operating?

A. One unit operating.

Q. How many units do you have?

A. Two.

Q. At each of those places?

A. At each of those places.

288 Q. You have gotten into the habit in this examination of talking about gas fields, about the Cameron field, and the Blacksville field, and the Hundred field, and Sedalia field, and others; is there any hard and fast boundary line around any of those fields?

A. No, I would not say that there was. They are names used for the purpose of defining certain territory. Now, Blacksville,—you mention Blacksville in your question,—I don't recollect of stating anything about Blacksville field. You seem to be under a misapprehension perhaps about the Blacksville field. That plant, I believe, consisted or two wells and some pipe line, I think we supplied four customers there.

Q. All right, remove that.

A. If it is your impression that that is a large thing, that amounts to anything, I just want to correct that.

Q. All right, we will remove that, and pick a bigger field. What I was getting at is this: As you start in Pennsylvania and go down through West Virginia to the parts of West Virginia farthest away from the Pennsylvania line where gas development exists, there is practically a continuous field, isn't there?

A. I would not say that at all, no, sir.

Q. What do you say?

289 A. I say that the fields are more or less isolated.

Q. Is there any county in West Virginia from the Pennsylvania State line to the territory roughly defined at Kanawha County, Boone County, Clay County and Braxton County, where there is not or has not been natural gas development and production?

A. I would say that in practically every county there has been more or less gas production. That is, not in every county in your State, but in every territory defined by your question. I don't mean to state by my answer that all that territory is gas-producing territory, or that it supplies gas in large enough amounts to be commercially valuable.

Q. Of course it is true that you won't get gas wherever you happen to drill a well in that territory?

A. We have found it so, yes, sir; very often so. That is one of the peculiar natures of the industry, you are never certain of securing gas until your pit has hit a gas-producing sand.

Q. In the territory I have indicated, bounded on the north by the Pennsylvania line and the Ohio River, adjoining the Panhandle, and running down to those counties I have indicated, beginning

290 with Kanawha and running over to Boone and Braxton, are there any counties in which gas has not been found to be produced?

A. I realized that in your first question. I would say that there has not been; as to the counties south of the territory which we operate, it is only—I am only acquainted with it in a general way, and I would say that there is not.

Q. What were some of those small or local gas companies that you had in mind which had paid large dividends?

A. One of them was the Manufacturers Gas & Electric Company, at Cameron, West Virginia.

Q. What territory did it supply?

A. In and about Cameron, West Virginia. Another one was the Cameron Heat & Light Company.

Q. In the same territory?

A. In the same territory.

Q. Any others?

A. Not where the information was secured from authentic,—what I consider an absolutely authentic source. The information as to these two companies I mentioned was secured direct from the officials of the companies.

Q. What was the period during which they paid those large dividends?

A. (Referring to memorandum.) The Manufacturers Gas & Electric Company commenced to supply gas in the fall of 1911;
291 they have 249 acres under lease; they have drilled six wells, drilled three wells in the past two years, two productive and one dry; in the winters of 1918-1920 gas was shut off from factories to take care of domestic; they paid no dividends in the last four years; they paid 60 per cent on $15,000 capital stock; the average amount of gas used by each consumer, 125,000 cubic feet per year. The information was secured by our Mr. Gifford from H. M. Fisher, Secretary and Treasurer of their company.

Q. Where does he have his office?

A. I think at Cameron, West Virginia.

Q. I want to know when that dividend was paid?

A. I don't know; I presume we can secure that information, I don't know whether we can or not.

Q. All right, go on to the next one.

A. Cameron Light & Heat Company commenced to supply gas in 1913; they have 250 acres under lease; have drilled seven wells, two wells in the last three years; have paid 240 per cent dividends on $25,000 capital stock; last dividend paid 1919; average consumption for each consumer was 130,000 cubic feet per year. Information was secured by Mr. Gifford from Harvey Hicks, Secretary of the Company.

Q. Address, Cameron?

A. I believe so.

292 Q. What period did that dividend payment cover?

A. Well, I have it here, they say commenced to supply gas in 1913; I would say it commenced at that period.

Q. Until 1919, or '20?

A. They say the last dividend was paid in 1919.

Q. Is that the crop?

A. That is the crop that I say I believe I have authentic information, I told you the source from which the information came, and so forth; otherwise I wouldn't use it, I don't feel like using the others, because it is absolutely hearsay. I believe I explained the manner in which I secured that information.

Q. You gave us an elaborate statement the other day as to the effect of a gas shortage in Pennsylvania, and its effect upon the lives, health, comfort and convenience of the good people of Pennsylvania; do you apply that statement equally to a shortage of gas in West Virginia?

A. I apply that statement to any place where a shortage exists—any state or any community.

Q. Well, you endeavored to demonstrate the other day that the restriction of the quantity of gas going out of West Virginia would make itself felt in a shortage in Pennsylvania; that was the substance of it, was it not?

A. I recollect, I believe, of making a statement to the effect
293 that if any additional amounts of gas were taken from our lines in Pennsylvania, that it would have the effect of creating shortages in Ohio and Pennsylvania, and incidentally West Vir-

ginia as well. The upper end of West Virginia, principally the towns of Chester and Newell, are supplied with gas from lines leaving the State of Pennsylvania and entering—re-entering the State of West Virginia; and also from lines coming from Ohio and entering the State of West Virginia. If you recollect my testimony, I stated at least one town in West Virginia that we were short last winter. So that in those communities, no matter where they are, if they were located so that I couldn't get the gas to them, they would be short.

Q. Your point of view is that the more gas you take or consume in West Virginia, the less there is to be consumed in Pennsylvania and Ohio; is that it, in substance?

A. That is true. And the more gas used by customers in Pennsylvania at certain points means less gas for other consumers in other localities right in the same state of Pennsylvania.

Q. Now, the same thing has been true, and always will be true, regardless of legislation?—if you don't have enough gas to go around, and supply everybody?

A. I would say yes, with an explanation. If we were required to furnish amounts of gas which, for instance, our indus-
294 trial consumers would like to have and would take, in West Virginia, the amount of gas which they would use and would take would be taken to the detriment of consumers further along in the states of Pennsylvania and Ohio and also West Virginia—that is, the domestic consumers. Take, in extreme cold weather, when the domestic consumer is using all the gas that he desires, if I were to permit the use of gas for industrial purposes, there would be a great shortage in the supply of gas to domestic consumers. It is by the discontinuing or curtailing of the amount of gas furnished industrial consumers that we can tide ourselves over during these cold periods, these peak load periods. In other words, we divert and give to the domestic consumer the gas that we have available, in preference to giving it to the industrial consumer. You can readily see, if I was called upon at times even for only a million feet of additional gas to factories, that would mean one million feet less for domestic consumers. There have been times that I have been short, that a million feet, if I had it available, would have prevented that particular shortage. Now, when that gets up to eight or ten mil-
295 lion feet, and they take it out, and it is not permitted to be utilized for domestic use, the prospect of shortage becomes very much more acute.

Q. Now, to come back to my question: As to the requirements of the industrial consumption, it always has been true, and always will be true, the more gas you use in West Virginia, the less gas you have had or will have for use in Pennsylvania and Ohio?

A. I would answer that yes, just as I did your other question.

Q. And that fact is not changed by the existence of any law to the contrary? That fact is the same, isn't it?

A. One reason for that would be, Mr. Hoffheimer, the large amounts of gas which we purchase in the State of West Virginia.

Q. Now, the fact is that your total gas supply is on the decline?

A. I would say yes, sir.

Q. Do you know of any other place to go and get gas for service in West Virginia, Pennsylvania, and Ohio?

A. I know of no certain locality that I could go to and secure additional gas, other than fields in which we are operating at the present time.

Q. Which is in those three states, principally West Virginia?

A. No, all our own production—We secure the larger part of our own production in the State of Pennsylvania. As pre-
296 viously stated, we purchase large quantities of gas in the State of West Virginia, our own production, however, the largest portion of it, is in the State of Pennsylvania.

Q. Has your Pennsylvania production increased any in the last three years?

A. I would say not.

Q. Is there any prospect of increase in Pennsylvania in the future?

A. I would like to believe so, but I am afraid not. That is one of the uncertainties of our business. We are endeavoring to discover every place in which the company operates—discover new fields, new localities. You are somewhat familiar, for instance, with the McKeesport field. It might be our good fortune to stumble, for instance, and develop a field of that sort; but there is no known field, or no known fields, that I know of at present, that we could go and develop new territory.

Q. Does that apply also to Ohio and West Virginia?

A. I would say so, yes, sir.

Q. What is the effect whenever your consumers have only a partial supply of gas, even for domestic consumption?

A. By the word "partial," do you mean there is a little gas in their lines?

297 Mr. Weil: You mean, an insufficient supply?

Mr. Hoffheimer:

Q. If they don't have sufficient to use for cooking or use for illuminating purposes?

A. They would be unable to cook, unable to heat their homes, unable to light their homes; depending, of course—the degree would depend entirely, of course, on the amount of gas available for their use.

Q. The tendency is to drive them to other fuels?

A. I would say yes, in answer to that question—that my belief is that every shortage that you have, some consumers put in substitute fuels, yes, sir. As those shortages become more pronounced, and the belief is formed by them that they can no longer depend on natural gas for those uses, they will put in substitute fuels.

Q. So far your attempt to meet that condition has been by cutting off or restricting industrial consumption; is that right?

A. So far we have attempted to overcome those conditions by securing additional gas, either through our own developments or by

purchase, and in times of emergency, utilizing every foot of gas available for the use of domestic consumers.

298 Q. Taking into consideration the constant tendency to decline in your supply, you are going to reach a time when you won't have enough to even supply your domestic consumers with full service, aren't you?

A. There might come a time when we will not have sufficient gas to meet all the requirements of the domestic consumer.

Q. That was the history in Indiana, wasn't it?

A. Correct, sir.

Q. And the history of part of Ohio?

A. That is correct.

Q. And when that time comes, what are you going to do?

A. There are certain industries to which natural gas is peculiarly adapted. The use of gas for cooking, lighting, and hot water heating are the purposes I mention. To use substitute fuel for the purposes of cooking, he would use coal or wood—he might use those. If he did, it would mean that some member of the household would be required to rise earlier each morning than perhaps his custom had been when using natural gas. During the warm periods of the year, perhaps he would have to build his fire two or three times to cook. The woman of the household perhaps would have to bake and iron and cook over a hot stove. They could use gasoline or oil for the purpose of cooking; it is more expensive than natural

299 gas, and personally I consider it much more dangerous than natural gas. Electricity could be used as a substitute, but at a much higher cost, perhaps prohibitive, so far as the majority of our customers is concerned. It is true that he could use manufactured gas, but he would be receiving a gas of perhaps only half the heating value of natural gas, and at an increased cost. It would take some time too to construct an artificial plant. The same substitutes apply to lighting. Under those conditions, I personally am of the opinion that natural gas for those uses is an absolute necessity. When it comes to the question of using natural gas for heating the home, I claim that it is not a necessity, and that other fuels can be used very readily; and in a great many homes they are so equipped that they could use other fuels. I would say that the time will come in the industry, probably, when the amount of gas for heating purposes will perhaps be restricted. I believe that it is policy perhaps, both for the company and the consumer, to accept some restriction. I mean, it would prolong the life of the industry if it were done. They would have the advantage of natural gas for those special uses at a less cost, and receive a gas of twice the value of artificial gas, for some years. If they do not accept that, the life of the industry is

300 perhaps shortened. Then he will be forced to go back, perhaps, to some inferior substitute.

Q. When you get to the conditions you have described, you would confine your gas consumption to illumination and cooking—is that all?

Mr. Weil:

Q. And hot water heating?

A. Water heating and perhaps, incidentally, heating stoves in the bathrooms and bedrooms; that is, if that step was necessary, Mr. Hoffheimer.

Mr. Hoffheimer:

Q. Let's carry the step farther: You have a plant distributed throughout three states, over a territory covering a distance of something like 167 miles between its extremes; leave it under the arrangements which you describe, you figure that you are going to have a perpetual supply of natural gas?

A. I have no recollection of so testifying.

Q. I don't want to accuse you of that, but is that your idea, or the contrary?

A. No, I would say, basing my answer on previous history of the industry, I would say that there will come a time when there will be no natural gas. As to when that time comes, however, I
301 would be unable to state.

Q. Then between the present day and that dismal future when there is no natural gas, we are going to have a period of decline?

A. I would say yes.

Q. And you are going to have a period in which, while there is some gas, there is not enough gas to go around?

A. I would say yes.

Q. Even with a minimum of use, for the limited purposes you have described?

A. I would not want to say that, unless I would go a little farther. If the amount of gas was restricted, that is, the sale of gas were restricted, and used for the purposes of cooking, lighting and hot water heating, why it would add, I believe, many years to the life of the industry.

Q. Suppose I assume that in my question: still between the present and the time when you will have no gas you are going to have a decline?

A. As the time would approach when you had no gas, you would perhaps suffer shortage even for that use.

Q. You would have to cut off consumers, wouldn't you?

A. Eventually, I would say yes. As the period drew near when you had no gas, you would.

Q. And as a practical operating proposition, you then will have to curtail your consumption?

A. I think by the time that period is reached, the trouble
302 would cure itself. I mean by that, Mr. Hoffheimer, that every interruption which you have to service causes so much trouble, so much inconvenience, so much actual suffering at times, that the consumer would put in some substitute appliances, would not depend on natural gas for that use entirely, would use it when he had it, and when he didn't have it would use a substitute.

Q. All right, suppose it happened that way instead of by a notice from you. What are you going to do with your plant?

A. We are in hopes we might be able to use them in some methods of manufacturing gas, that might be developed. We are always living in hopes that we might some day be able to continue our business and realize on our investment—something of that nature. We also have a dream that perhaps by drilling deeper, much deeper, we might find some new source of supply. As I stated, we are living in hopes all the time, Mr. Hoffheimer.

Q. And the other alternative is to discard your plant?

A. If we had no natural gas, or had no substitute gas, that we could market, our plant would necessarily have to be abandoned.

Q. Can you give us any idea, Mr. Quay, as to the original rock pressures of the wells in West Virginia?

303 A. Well, I would say that the rock pressures differ in different fields, and would differ as to what year you wanted to take them in. I would not be prepared to answer offhand what any particular rock pressure would be. I don't attempt to retain them in my memory. We have certain data; I can give you the pressures at which these new wells came in. I want to say, however, that our records as to rock pressures are not very complete—that is, only the recent years.

Q. I was trying to obtain your idea as to the general situation rather than as to any particular wells.

A. If you would mean whether or not the rock pressure is declining, I would say that it is gradually declining.

Q. Take the Sedalia Field, or any one of the fields—when you knew the field first?

A. I couldn't give it to you offhand.

Q. Well, what would you say was the average rock pressure of your wells?

A. It would depend on what sands the gas came from—different sands, different gas-producing sands. As I stated, I would be unable to give them to you with any certainty as to the accuracy of it, from memory.

Q. Well, you may qualify it however you please.

304 A. Supposing I would secure it for you and give it to you, suppose I would ascertain from actual records what the actual rock pressure was, wouldn't that be better than attempting to guess and perhaps give it to you inaccurately?

Q. Yes.

A. I hesitate to say, because it might be wrong. It all depends on what sands, and so forth.

Q. Suppose you look it over, without going into any exact details?

A. I will pick out five or six wells in different sands, and give you the rock pressure,—say, for instance, the Hundred and the Cameron.

Q. You made some general statement the other day as to the reserves of the smaller gas companies,—that is, something like the snakes in Ireland, isn't it?

A. I presume you refer to my making the statement, as a general rule, at least, the smaller companies had very little acreage?

Q. Yes.

A. Yes.
Q. What gas companies did you have in mind?
A. I had in mind the two particularly that I read out to you.
Q. Those were the two dividend payers?

A. Also the Dunkard Valley Oil & Gas Company, at
305 Blacksville, West Virginia, they had 320 acres, one farm, under lease. At the present time, they have 55 acres under lease; had four gas wells. They have drilled no wells during the past two years. Have plenty of gas in the summer time. Had no supply of gas up to the year 1917; since that time have been buying gas for winter months. Average domestic consumption to average domestic consumer, 144,000 cubic feet per year. And it is stated the Manufacturers' Gas & Electric Compay, at Cameron, have 249 acres under lease; Cameron Heat & Light Company, 250 acres under lease. I have here information as to the acreage of the Hundred Gas Company, located at Hundred, West Virginia, which has 80 acres under lease. Part of that information was secured from Mr. Toothman, who was secretary and treasurer of the Hundred Gas Company, by Mr. Burson, our local foreman in that district.

Q. Now, as a matter of fact, the statement that the smaller gas companies are without adequate reserve, or without sufficient territory to adequately supply their consumers or to bear their peak load, is true as a general statement with regard to the local gas companies in West Virginia; is that correct?

A. I would say that that is correct, as far as I am acquainted with those with whom I am acquainted. Now, I believe the original question asked me was as to whether or not they had made ample
306 provision to secure—What I had in mind was, if I was in any territory, gas producing territory, and there was any acreage which I could secure, why, I would be only too anxious to secure it. I mean by that, that instead of taking up two or three hundred acres, even if I had a small company, I would undertake to secure additional acreage, even though I didn't need it at that immediate time, believing, of course, that the time would come when I would drill additional wells, and in that manner keep my supply of gas up.

Q. Anyway, it comes to this: that they don't get enough territory to take care of their peak load?
A. I wouldn't want to say that.
Q. How?
A. I wouldn't want to answer that question as broadly as that.
Q. Then put it this way: they haven't enough?
A. I would say the companies I am acquainted with, as a general rule, have not enough.
Q. All right. Who does control the acreage?
A. I know of no one who controls the acreage. I believe that we control some—whatever the figures were, 350- or 360- or 370,000 acres, and the companies which hold leases on the other property, I presume control the acreage that they have under lease. I know of no one that controls any of the acreage, other than the owners of it.

Q. Well, leaving out the word "control," who has the bulk
307 of it in West Virginia?

A. That is something too, not knowing the amount of acre-

age that the other companies own, I would be unable to answer that question.

Q. Who are the companies that have the most of it?

A. I would not be able to say. There are two or three larger companies in West Virginia other than ours,—There is the Hope Natural Gas Company, there is the United Natural Gas Company, and I believe the Columbia operates down there in the lower part of West Virginia, also the Philadelphia Gas Company. As to the acreage held by each company, it would be impossible for me to even guess at it.

Mr. Weil:

Q. How about the Carnegie Natural Gas Company?

A. Yes, the Carnegie Natural Gas Company is in West Virginia.

Mr. Hoffheimer:

Q. When you speak about the United Natural Gas, you mean the United Fuel Gas Company.

A. Yes, the United Fuel Gas Company.

Mr. Hoffheimer: Upon direct examination reference was made to the gas sale agreement between the Hope Natural Gas Com-
308 pany and the Manufacturers Light & Heat Company. I then reserved the right to move to strike out that evidence, unless the contract itself was produced. We now ask the production of that agreement.

Mr. Hoffheimer:

Q. That agreement, I understand, to be in writing?

A. The agreement that you refer to is in writing.

An adjournment was here taken until Wednesday, June 2, 1920, at 10 o'clock, A. M.

309 Wednesday, June 2, 1920.

And now, Wednesday, June 2, 1920, the hour of 10 o'clock, A. M., having arrived, hearing resumed pursuant to adjournment; the Commissioner and counsel present as heretofore noted, Fred O. Blue, Esq., being also present, on behalf of the State of West Virginia.

Mr. Weil: In reply to the notice given at the close of the examination on yesterday, to produce the contract between the Hope Natural Gas Company and the Manufacturers Light and Heat Company; As a precedent, and to preserve the rights of the Manufacturers Light and Heat Company, which is not a party to this suit, the right of the defendant to demand the production of this contract, which is a contract between the two companies, and a part of their private business, is denied, and the right to compel the production thereof is denied, and its competency, relevancy or materiality to any issue now pending is denied; and therefore the right to demand the pro-

duction of the paper and to offer the same in evidence is ob-
310 jected to. But since this paper is a part of the records before the Public Service Commission of the Commonwealth of Pennsylvania, and counsel also believes, before the Public Service Commission of the State of West Virginia, in cases there pending, the agreement is produced for the examination of counsel for the defendant; but with the reservation of all of the objections heretofore made and placed upon the record with reference thereto; and when and if the same should be offered in evidence, this production of the paper is not a waiver of whatever rights the Manufacturers Light and Heat Company will then have, with reference to objections to its being offered in evidence. Accordingly, I produce the agreement and submit it to counsel.

Mr. Hoffheimer: The agreement having been produced, the State of West Virginia enters into no discussion as to the validity of the reservations, denials or objections of the State of Pennsylvania and the State of Ohio.

311 H. A. QUAY, recalled.

Cross-examination (resumed).

Mr. Hoffheimer:

Q. Mr. Quay, there has been produced by counsel for the complainant states, in pursuance of a notice of yesterday, an agreement dated May 1, 1910, between the Hope Natural Gas Company and the Manufacturers Light and Heat Company, already identified by a mark, in the case of the Public Service Commission of the Commonwealth of Pennsylvania, "C Docket, No. 1815-1917." Is this the agreement to which you have previously referred in your testimony, and the agreement under which the Manufacturers Light and Heat Company has purchased and does purchase gas from the Hope Natural Gas Company?

A. Yes, sir.

Q. This is the original, or a duplicate original?

A. I take it that it is the original, because I am familiar with the four signatures that are written in ink, so I take it that it is.

Mr. Hoffheimer: The agreement produced is offered in evidence by the State of West Virginia, to be marked for identification "West Virginia, Exhibit No. 1."

312 Mr. Weil: This is objected to, as incompetent, irrelevant and immaterial.

The Commissioner: Let the objection be noted, and the exhibit taken.

The Commissioner: Do I understand that your objection, which you originally stated, at the time you produced the paper, applies to this formal offer?

Mr. Weil: Yes.

NOTE.—It is agreed that the stenographer shall make a copy of the original paper, "West Virginia Exhibit No. 1," to be identified in

the same manner as the original, for all purposes of these cases, and to have the like force and effect as the original. The objections to the competency, relevancy and materiality of the exhibit of course not being waived on account of this stipulation.

Mr. Hoffheimer:

Q. In your testimony you have referred particularly to deliveries of gas by the Hope Natural Gas Company to the Manufacturers Light and Heat Company, at Sedalia, West Virginia. Have
313 not deliveries been made and are not deliveries being made by the Hope Natural Gas Company to the Manufacturers Light and Heat Company, at Morgan, in Marion County, West Virginia, and also at or near Iuka, Tyler County, West Virginia?

A. That is correct. I believe in the previous testimony, however, you will find that I stated that we received gas from the Hope Company at the Hundred compressing station, which would represent Morgan that you referred to; and at the Porters Falls station, which would represent Iuka, which you mentioned.

Q. Perhaps it would help us if you would identify on the map in evidence these two places, Morgan and Iuka.

A. The Morgan station is a station owned and so named by the Hope Company. It is at that point that they deliver gas to us which enters our Porters Falls station—Porters Falls compressing station, located in Wetzel County, West Virginia.

Q. While you are talking about that compressing station, will you tell us where the point of delivery by the Hope Company is?

A. The point of delivery is in Tyler County.

Q. How is it marked on your map, Complainant's Exhibit No. 1?

A. It is marked "Hope Natural Gas Company, Pitot Measuring Station."

314 Q. That is the designation almost directly south of the Porters Falls station?

A. West and south. The gas delivered to us by the Hope Natural Gas Company and which enters our Hundred compressing station, which is located in Wetzel County, is delivered into our lines at a point in Marion County, West Virginia.

Q. We are talking now about the delivery at Morgan, what is designated as Morgan.

A. Yes, sir. I want to make a correction. As stated, Morgan is the name designated by the Hope Company to their Pitot station, and I am not absolutely familiar with the names they use. When I stated that the gas entering Porters Falls compressing station was at a station named Morgan, that was in error. That should have been Smith station.

Q. Well, to identify that with the agreement itself, that point of delivery in Tyler County is what is referred to in the gas purchase agreement as Iuka,—whether that is the name now used or not?

A. Yes, sir, that is correct. The Hope gas which is delivered to us, and which enters our Hundred compressing station located in Wetzel County, is delivered into our lines at a point located in Marion County, West Virginia.

Q. Designated how on the map?

315 A. Designated on the map as the Hope Natural Gas Company, Pitot Measuring Station.

Q. And without regard to the correctness of the name, that is the same point which is referred to in the Gas Purchase Agreement as Morgan?

A. Correct.

Q. At the Sedalia compressing station, how is the point of delivery indicated on your map?

A. The point of delivery is indicated by the words "Hope Natural Gas Company, Pitot Measuring Station."

Q. That is practically at the Sedalia compressing station?

A. The point of connection is close to our company's compressing station.

Q. Have you had time in which to prepare the statistics of the numbers of consumers for which I asked yesterday?

A. I have.

(Paper shown witness.)

Q. In the Gas Purchase Agreement, paragraph 7, which I show to you, there is a reference to the payment of certain floating debt by the Manufacturers Light and Heat Company, which appears to furnish contingencies upon which gas is furnished, in alternative ways, or in alternative amounts. Without going into any details about it, I merely ask you whether that floating debt has been paid?

A. I am of the belief that it has. To state definitely

316 though, I would be unable to do so. It is my belief that it has been paid off.

Q. To put it in another way: In that same paragraph there is a proviso that until the present floating indebtedness of the Manufacturers Company is paid off, if it is paid off within seven years from May 1, 1910, and so forth, the Hope Company will supply to the Manufacturers Company, under this agreement, a proportion of its production of gas not exceeding the domestic consumption of the Manufacturers Company and of the companies controlled by the Manufacturers Company, at least equal to the proportion which the number of domestic consumers supplied by the Manufacturers Company and its subsidiary companies bears to the total number of domestic consumers on all the systems then obtaining their supply of gas from the Hope Company, including the system of the Manufacturers Company and its subsidiary companies? The section then proceeds: "And that after said floating indebtedness has been paid off or said seven years have expired, the Hope Company is to have the right to supply its own domestic consumers in West Virginia, and to supply the East Ohio Gas Company and the Peoples Natural Gas Company to the extent of their requirements," and so forth. I would like to ask you under which plan now, or under which

317 provision, the Manufacturers Light and Heat Company is receiving gas from the Hope Natural Gas Company?

A. That I think would be in a manner hard for me to answer. Not knowing the available amount of gas which the Hope Com-

pany has for the use of its customers, I would be unable absolutely,—not knowing anything about the operations of their company—to state whether or not at the present time they do give any preference, or a preference, to the East Ohio Gas Company or the Peoples Natural Gas Company.

Q. That is not——

A. You refer, I presume, in your question, as to the amount of gas which the Hope Company delivers to the Manufacturers Company?

Q. What I am getting at is this: That section provides for two alternatives, under one of which the Hope Company shall furnish the Manufacturers gas in a particular way; and then, under the other of which, the gas is to be furnished in a different way?

A. In the first manner,—I presume you refer to the fact that the Manufacturers Company was to receive gas in proportion to the total number of consumers on all companies being supplied by the Hope Company. Not knowing their customers, the number of cus-

318 tomers that they have, I would be absolutely unable to state whether deliveries were made in that manner or not. The second is, that the East Ohio Gas Company and the Peoples Natural Gas Company are to receive a certain preference in deliveries over the Manufacturers' Company. Not being the party who makes this distribution of their gas, I would be absolutely unable to state.

Q. Well, do you not know whether the Hope Company is performing its contract with the Manufacturers?

A. That is a different question. I so take it, at least.

Q. Who is the particular officer, or are there any particular officers or agents, of the Manufacturers Company, who do have the knowledge as to the one of the two alternative plans under which the gas would be delivered by the Hope Company?

A. There would be nobody connected with the Manufacturers Company that could answer that question, as I said.

Q. Well, that information is all locked up in the breast of the Hope Natural Gas Company?

A. I wouldn't care to say that, either. They could tell you, I presume. I am unable to answer for them.

Q. Well, to leave that then, if you don't know, we will go on——

A. If I did know, I would be only too pleased to answer you.

319 Q. Will you go on with your figures, as to the number of consumers asked for yesterday?

A. Prior to the year 1915, we had no reports, no combined reports, showing the number of consumers in each state. If agreeable, I can give the total number of consumers on the company's lines for the years 1910, 1911, 1912, 1913 and 1914, under domestic classification, industrial classification, and miscellaneous. And from that period on I can furnish you the numbers of the various classes of consumers in the various states.

Q. Give us what you have.

A. In the year 1910, we had a total of 64,912 domestic consumers. We had a total of 704 industrial consumers.

In the year 1910 there were no subdivisions as to miscellaneous customers.

In 1911, we had 74,605 domestic consumers; 675 industrial consumers, and 1,100 miscellaneous consumers.

In the year 1912, we had 78,890 domestic consumers.

Q. What was that last?

A. 78,890. We had 661 industrial consumers; 1,164 miscellaneous consumers.

In the year 1913, we had 82,840 domestic consumers, 564 industrial consumers, 1,417 miscellaneous.

In 1914, we had 86,854 domestic consumers, 540 industrial
320 consumers, 1,593 miscellaneous consumers. Shall I finish one state at a time?

Q. Whichever you wish. How have you got it there?

A. By states.

Q. All right.

A. In 1915, we had in the state of Pennsylvania, 60,218 domestic consumers, 248 industrial consumers, 1,070 miscellaneous consumers.

In the year 1916, we had in the state of Pennsylvania 65,530 domestic consumers, 268 industrial consumers and 1,133 miscellaneous consumers.

In the year 1917 we had 68,808 domestic consumers, 267 industrial consumers, and 1,106 miscellaneous.

In the year 1918 we had, in the State of Pennsylvania 69,895 domestic consumers, 354 industrial consumers, 1,032 miscellaneous.

In the year 1919, we had, in the State of Pennsylvania, 72,781 domestic consumers, 364 industrial consumers, and 1,075 miscellaneous.

We had in the year 1915, in the State of Ohio, 22,396 domestic consumers, 200 industrial consumers, and 277 miscellaneous consumers.

In the year 1916, in the same state, we had 23,679 domestic
321 consumers, 199 industrial consumers, and 276 miscellaneous.

In the year 1917, in the same state, we had 24,912 domestic consumers, 198 industrial consumers, and 280 miscellaneous.

In the year 1918, in the same state, we had 25,531 domestic consumers, 195 industrial, and 205 miscellaneous.

In the year 1919, in the same state, we had 25,620 domestic consumers, 198 industrial consumers, and 212 miscellaneous.

In the State of West Virginia, in the year 1915, we had 8,549 domestic consumers, 133 industrial consumers, and 360 miscellaneous.

In 1916, in the same state, we had 9,107 domestic consumers, 122 industrial consumers, and 572 miscellaneous.

In the year 1917, in the same state, we had 9,708 domestic consumers, 126 industrial consumers, and 580 miscellaneous.

In the year 1918, in the same state, we had 10,095 domestic consumers, 152 industrial consumers, and 548 miscellaneous.

In the year 1919, in the same state, we had 10,435 domestic consumers, 162 industrial consumers, and 580 miscellaneous.

Now, the totals, for the year 1915, domestic consumers in
322 all states, 91,703. The same year, industrial, 581. Same year, miscellaneous, 1,707. Or a grand total of 93,551.

In the year 1916, we had 98,316 domestic consumers, 589 industrial consumers, and 1,981 miscellaneous consumers, or a grand total for that year of 1,886.

In the year 1917, we had 103,428 domestic consumers, 591 industrial consumers, 1,966 miscellaneous consumers, or a total for that year of 105,985.

In the year 1918, we had 105,521 domestic consumers, 701 industrial consumers and 1,785 miscellaneous consumers, or a grand total of 108,007.

In the year 1919, we had 108,836 domestic consumers, 724 industrial consumers, and 1,867 miscellaneous consumers, or a total of 111,427 consumers, which participated in the earnings as of December 31, 1919.

Q. Has the gas provided by this agreement of May 1, 1910, between the Hope and the Manufacturers Company, offered in evidence this morning, been actually furnished?

A. If you will name the period of time which you refer to, I can perhaps answer that more definitely. Do you mean through the period of any year?

Q. Since the contract has gone into effect.

A. Do you mean by your question as to whether or not the Hope has given us an amount of gas equal to what the contract
323 called for?

Q. Yes.

A. I would say they have sold us more than what the contract called for, taking the life of the contract. I do not mean to say by that—There have been times when they have not furnished all the gas that we required or needed, or perhaps we felt we were entitled to. That is, there were days that they were short.

Q. What you mean to say is that in the aggregate they have given you as much or more——

A. I would say, during the life of the contract, the aggregate; we have purchased from the Hope an amount that would be equal to their contract.

Q. How about the year 1919, with which you are familiar?

A. The year 1919,—they might have been a little under or a little above, taking the year as a whole, for the year 1919. Now, that is my recollection; I don't want to be correct on that.

Q. Will the records of your company show the quantities of gas delivered by the Hope Company to the Manufacturers from year to year since May 1, 1910?

A. I would say I believe so.

Q. Will you have such a statement prepared and furnished, in the same way in which you have given us the other state-
324 ments?

Mr. Weil: Counsel for the complainants object to this examination, taking the direction of an inquiry into the personal, private

business of these gas companies, by inquiring into the deliveries in specific instances, as between the contracting parties, as furnishing no evidence relating to the controversy here; the inquiry being as to the general quantities, the aggregate quantities, of gas obtained and obtainable, and not whether A or B or C, as between themselves, are able to comply with their contracts. The witness has answered the question propounded, to the best of his ability, and is under no obligation to have statistical data prepared for matters that are wholly incompetent, irrelevant and immaterial to any issue here. Counsel is willing, if the Commissioner does not feel that he should rule upon these questions, to have the same submitted to the Court for an opinion. This testimony is objected to as incompetent, irrelevant and immaterial, and can have no possible bearing upon any
325 question at issue involved in this controversy. Considering the scope of the examination and the demands made upon the witness heretofore, and the present demands, counsel for the complainants instructs the witness to decline to answer at the present time; and whether or not such a statement will be furnished will be determined before tomorrow, at the first sitting of the Commissioner, to take testimony, depending to a considerable extent upon what further and other data is going to be asked for from the witness.

The Commissioner: Do you understand that, Mr. Hoffheimer?

Mr. Hoffheimer: I understand it, and I propose to make another statement on the record. The defendant state of West Virginia maintains that this line of cross examination is proper, both as relating to the examination in chief and as relating to the issues of the case. In order not to encumber the record, unless the Commissioner desires a statement of the particular reasons why we regard this examination as proper, I will omit that; that is, unless it is desired by the Commissioner to have that.

326 The Commissioner: The Commissioner will state that the ordinary rule is that counsel on making an objection or a proffer, will simply state the reasons,—not argumentatively—and counsel of course have to determine the adequacy of their statements of grounds for objections or for offers.

Mr. Hoffheimer: The State of West Virginia insists that this examination is a proper cross examination in relation to the evidence of the witness in chief, as to the fact of the purchase and delivery of gas by the Hope Company to the Manufacturers Company, and that it is material in that regard as well as in respect to the enquiries already made, as to the transportation, destination and distribution of the particular gas in question. The State of West Virginia further insists that the denomination of the relations between these companies as "private" cannot limit, and does not limit, the regulatory powers of the State of West Virginia, or the scope of the operation of this Act. The State of West Virginia insists further that the witness himself having made no objection to the furnishing of
327 the information asked, either in regard to himself or the Manufacturers Light & Heat Company, that neither the State of Pennsylvania nor the State of Ohio has any concern with the convenience or inconvenience to the Manufacturers Light and Heat

Company; but that when the Manufacturers Light and Heat Company, in its own person or by counsel, makes that objection, it will be time enough to pass upon it. The State of West Virginia also insists that the scope of its cross examination is not to be limited either by the questions, the doubts or the insistence of the complainant states; and the State of West Virginia asks the Commissioner to require the witness to answer or comply with the question.

Counsel for the Commonwealth of Pennsylvania renew their direction to the witness to defer his answer to the question and his furnishing of the information until the next day's hearing.

Mr. Hoffheimer: I will state this: that if either the convenience of Mr. Quay or of the Manufacturers Light and Heat Company
328 would be served by a postponement until tomorrow, I am willing to assent very cheerfully to that postponement, and if Mr. Quay needs more time, we are willing to give it to him; but we also state that these postponements are not to take place upon the insistence or objection of complainants' counsel.

Mr. Weil: This last suggestion of counsel is answered by the fact that the witness, the general manager of the company, is now under examination; he has been asked to prepare certain data, the preparation of which would require a very considerable time, and instructions from him to his employees to make that preparation. If counsel insists upon a ruling upon this question now, let him so insist. We are ready, on behalf of the Commonwealth of Pennsylvania and the State of Ohio.

Here a recess was taken until 1:30 o'clock, P. M.

329 Wednesday Afternoon.

And now, the hour of 1:30 o'clock P. M. having arrived, hearing resumed pursuant to adjournment.

H. A. QUAY resumes stand.

Cross-examination (continued).

Mr. Hoffheimer:

Q. Going back to what you had to say in your previous testimony with regard to the effect in Pennsylvania and Ohio in case the full industrial requirements of consumers on your lines in West Virginia were supplied, I want to ask you this: If the reasonably adequate requirements for domestic consumption on your lines in West Virginia were supplied, what would be the effect on your gas supply and service in Pennsylvania?

A. If I understood the question correctly, I am asked, if simply an adequate supply to the domestic consumers in West Virginia is furnished, what would be the results on my customers in Pennsylvania and Ohio. I would say that we would be in position to render fairly adequate service.

Q. In Pennsylvania and Ohio?
A. Yes, sir.
Q. Supplying a reasonably adequate service to domestic
330 consumption along your lines?
A. Yes.

Redirect examination.

Mr. Weil:

Q. Mr. Quay, I understand you desire to make some correction in the testimony given by you at one of the preceding hearings in relation to the charge to Expense of the bonus paid upon leaseholds; you may make whatever correction you desire.

A. I believe I stated yesterday that I was under the belief that any moneys paid in the way of bonuses and securing leaseholds was charged to Expense. I find, on inquiry, that the money paid as bonuses for leases is charged to Capital Account.

(At the request of counsel for The Commonwealth of Pennsylvania, the last three questions propounded to the witness on cross-examination and the answers thereto were here read).

Q. As I understand the questions and your answers, this refers only to the domestic consumers upon your own lines?

A. The domestic consumers on the lines of the Manufacturers Company.

Q. When you were interrogated this morning with reference to the deliveries by the Hope Company under their contract, and
331 you answered with reference to the whole period, I want to call your attention to December of 1919 and January, February and March of 1920, how much, if any, was the Hope Company short in their deliveries to you during those months for your domestic consumption?

A. If I understand that question, I am asked to state the amount of gas the Hope Company was short in their deliveries to my company in the months of December 1919, and January, February and March of 1920?

Q. Yes, sir.

A. Somewhere approximating one billion, say one hundred million cubic feet.

Q. That is, for those four months?

A. Four months. It might run somewhat over that.

Q. You were asked in your cross-examination whether or not other companies were situated as was the Manufacturers Light & Heat Company, with reference to its lines crossing and recrossing the state lines between Ohio and West Virginia, and Pennsylvania and West Virginia, at so many points, and you answered that no other company had a like situation; now, I want to inquire if you intended to say that other companies than the Manufacturers Heat & Light Company did not cross and recross the respective state lines with their lines of transportation at various points?

332 A. If that question pertained to the whole state of West Virginia, there are other companies which cross and recross the state lines. In answering that, I was under the belief that the question was asked me as to the northern part, the Panhandle district, of the State of West Virginia.

Q. Now, these other companies that cross and recross the state lines at different points, can you name some of them of which you know this to be true?

A. The only knowledge I have is from direct information and general knowledge. The Equitable Gas Company, the Carnegie Natural Gas Company, the United Fuel Company——

Q. What is that name? Isn't it United Fuel Gas Company?

A. United Fuel Gas Company I believe is the correct name. Those are the larger companies.

Q. And you know that those companies do cross and recross the state lines at several points?

A. As stated, I do, from general information.

Q. The Equitable Company, do they supply gas in both Ohio and Pennsylvania?

A. As far as my own knowledge extends, they sell gas only in the State of Pennsylvania.

Q. And what about the United Fuel Gas Company?

A. My information on that subject is that they sell gas in
333 West Virginia and also in Ohio.

Q. What about the Carnegie Natural Gas Company?

A. They sell gas, I believe, in both the States of West Virginia and Pennsylvania.

Q. Have you ascertained the date when your industrial classification was withdrawn?

A. The date upon which our industrial classification was withdrawn was January 1, 1918.

Mr. Hoffheimer:

Q. What state are you referring to?

A. All states.

Mr. Weil:

Q. You mean that it was to go into effect as of that date?

A. That is the date it went into effect.

Q. The papers, I suppose, were filed, of course, prior to that time?

A. The applications and papers were filed with the various Public Service Commissions at least thirty days prior to that date.

Q. Prior to that time, the Manufacturers Heat & Light Company held itself out to the public as being willing to supply industrial consumers as well as domestic consumers?

A. Yes, sir.

334 Q. Now, after that date, I wish you would explain fully just what change was made in your relations to industrial consumers.

Mr. Hoffheimer: That is objected to, so far as it relates to industrial consumption in the State of West Virginia, where the relation of the Manufacturers Company and the other companies to industrial consumption has been definitely fixed by law.

The Commissioner: Let the objection be noted and the answer taken.

A. Prior to the withdrawal of our industrial classification and rates, we felt obligated to furnish a supply of gas to industrial consumers. At the time the classification and rate was withdrawn, we stated to each consumer, through a notice mailed them, each one separately,—in the letter stated that we were not in position to furnish them with a full and adequate supply of gas at all times, that we considered it necessary to receive certain information pertaining to each individual consumer's situation, there was certain information that we felt it was necessary for us to have, and to each one was mailed an application. On this application there
335 were certain questions asked for the purpose of furnishing us with the information that we desired and considered necessary. They were mailed back to us, or brought back to us in person, and we treated each one separately. In the application each customer was asked to state the various subjects in his plant in which he desired to use gas as a fuel. He was also asked as to the length of time each day that his plant operated, whether eight hours, nine hours or twenty-four hours. He was also asked to state what arrangements, if any, he had made relative to substitute appliances, and also asked to state the various subjects in his plant in which substitute appliances could be used; also asked to furnish the minimum amount of gas with which he could successfully operate his plant. He was also asked to state any particular situation in reference to gas deliveries, or anything pertaining to his business which might make his condition different from other customers on our lines. He was also asked to state the nature of his business, and what the gas was used for. In many instances, different contracts—Individual contracts were made with each one and inspection was made of his premises, of the appliances in which he desired to use gas. We ascertained our ability to furnish him,
336 taking into consideration these facts, and also other facts, such as his proximity to our pipe lines. Having gone carefully into those conditions, we determined whether or not we continued to supply him with gas, and for what subjects we would contract, or attempt to supply. In this application, it was recited that the gas sold to the industrial consumer was the surplus gas remaining after the requirements of the domestic consumer had been taken care of. We found in making this analysis, places where we considered and decided that we were unable to supply gas; for instance, boilers. We found in other places where consumers had appliances, especially designed for the use of gas; those were contracted for in so far as we could furnish them. In some instances, consumers with whom we had made contracts, we refused to enter into new contracts, and ceased to supply them with gas for certain purposes.

Q. Have you copies of those letters which you sent out, with you?

A. I believe I have.

(Seven letters were here produced and marked as Pennsylvania Exhibits Nos. 2 to 8, inclusive, respectively.)

337 Q. I show you Pennsylvania Exhibits Nos. 2 to 8, inclusive, being letters under dates of June 30, 1917, October 9, 1917, November 30, 1917, December 22, 1917, July 8, 1918, October 29, 1918, and January 28, 1920, and ask you if these letters were sent to all of your industrial consumers by the Manufacturers Heat & Light Company?

A. They were.

Mr. Weil: I now offer in evidence Pennsylvania Exhibits Nos. 2 to 8, inclusive, and ask counsel for defendant to agree (as these are a part of the records of the company, which the witness states he may be unable to replace) that copies thereof be made and substituted for the originals, with like force and effect as the originals.

Mr. Hoffheimer: We object to the offer of each and every of these letters, for the reason that they are mere self-serving declarations on the part of the Manufacturers Light and Heat Company; for the further reason, that these letters and statements of alleged facts therein can neither enlarge the rights nor diminish the obligations of the Manufacturers Heat and Light Company in the

338 State of West Virginia, or to the consumers therein; and for the further reason that the evidence is incompetent, irrelevant and immaterial. Subject to the objections we consent that copies may be substituted in the record, with like force and effect as the originals would have.

The Commissioner: Let the objection be noted and the exhibits taken.

Mr. Weil:

Q. Now, Mr. Quay, I call your attention to Pennsylvania Exhibit No. 2. I note the statement "if there is no change for the better in the cost and difficulty of obtaining a gas supply, due not only to the increased cost of production, but also to the depletion and exhaustion of developed territory, and the inability so far to find new territory, then in all probability, on or before December 1, 1917, this company will be forced to withdraw its industrial rates and not undertake to supply industrial consumers." Were those statements with reference to the cost and difficulty of obtaining gas, the increased cost of production, depletion and exhaustion of territory, and the inability to find new territory, true?

339 A. They were.

Mr. Hoffheimer: We object to that method of examination. We have no objection to the statement of specific facts and circumstances by the witness, but we object to the conclusions and arguments con-

tained in the letter, and the effort to obtain a statement from the witness, embodying opinions and conclusions of that character.

The Commissioner: Let the objection be noted.

Mr. Weil:

Q. I call your attention to Exhibit No. 5, under date of December 2, 1917; you refer to blank applications. Have you any of those blank applications with you?

A. I don't think I have, Mr. Weil. I can secure one readily for you. I have none with me.

Q. Will you bring copies of those applications with you tomorrow morning, so that we may offer them?

A. Yes, sir.

Q. I call your attention to Exhibit No. 8. You state "The supply of gas is fast diminishing, the cost thereof is becoming greater, the demands of domestic consumers upon our lines is increasing, and our ability to provide them with a reasonably adequate supply
340 has become more and more difficult, if not quite impossible. These conditions compel us to curtail the amount of gas to be supplied for industrial purposes, especially such industries which naturally desire, and as far as possible are entitled, to keep their plants in operation and not be subjected to losses incident to intermittent operation, especially during winter weather. It is our purpose, on March 5, 1920, to cancel your agreement with us for industrial consumption, and if any exception is made, it will be only for those units of your plant where other fuel cannot be readily substituted." Were those contracts cancelled on March 5, as the consumers were notified you would do in this communication Exhibit No. 8?

Mr. Hoffheimer: That question is objected to, in so far as it embodies alleged statements of fact, upon the grounds stated in the objection to the extract from a previous letter; also, on the ground that the evidence is incompetent, irrelevant and immaterial.

The Commissioner: Let the objection be noted and the answer taken.

A. All contracts for the sale of industrial gas, with the exceptions, I believe, of those with the United States Government, were
341 cancelled as of March 5, 1920.

Mr. Weil:

Q. State if they were cancelled for the reasons given in that letter, and if not, for what reasons they were cancelled, if there are other reasons?

Same objection.

The Commissioner: Let the objection be noted.

A. They were cancelled for the reasons given in that letter.

Q. What were the facts as to the reasons here given, were those the facts?

Same objection.
The Commissioner: Let the objection be noted.

A. As stated, those were the facts, and that was the reason the contracts were cancelled as of that date.
Q. Have those conditions continued from that time to this?

Same objection.
The Commissioner: Let the objection be noted.

342 A. When you refer to conditions, I presume you refer to the supply and availability for their use?
Q. Yes.
A. It has.
Q. State whether or not those conditions have become more acute during the last winter?

Same objection.
The Commissioner: Let the objection be noted.

A. Very much so.
Q. You stated in your cross-examination your purpose to continue to supply certain industrial consumers and explained the circumstances under which they would be supplied. I wish you would explain why this gas supply to industrial consumers is not reserved for use of the domestic consumers, in view of the shortage to domestic consumers which you have already detailed?
A. We consider it would be of no material benefit, rather, in rendering them more adequate service for various reasons: first, in the various fields in which my company operates there are other gas companies operating. They own wells and secure gas from the same gas-bearing sands as we do. If we were to discontinue entirely
343 the sale of industrial gas, there would be periods through the year in which we would shut in some of our wells. We would save nor gain nothing, for the simple reason that these other companies who would be selling industrial gas would be taking the gas out from the sands from which we secure our gas. The result would be that our sales would be materially lessened, consequently the earnings of the company greatly reduced, and the rate which it would be necessary for us to charge our domestic consumers would be very high, practically prohibitive. Again, we have in some of the various fields in which we produce gas various industrial consumers who receive at least a portion of their supply of gas from other sources than ours, and get gas coming from the same territory and in the same territory in which we produce gas. Again, there are various companies who operate principally for oil, and in drilling their wells with the expectation of securing oil, secure gas; as that occurs, at present times, they generally call the various gas companies, and the various gas companies purchase their production from that well. Were the sale of industrial gas to be discontinued

by my company, other companies, there would really be no market on the part of the gas companies for that gas—that is, during the major portion of each year. The company or person drilling that well, having made an expenditure of money, naturally would
344 seek, and does seek, a market for his gas. Basing my opinion entirely on previous history, no doubt industrial concerns and other people would purchase that gas, and it would be coming from the same gas-producing sand as that from which our gas is produced. For those reasons, I would say that it would be impossible for us to discontinue entirely the sale of industrial gas.

Q. In the art or industry of producing and supplying natural gas to consumers, has any way ever been discovered for storing gas after produced or found?

A. Our company has no means of storing the gas, other than the storage permitted by their pipe lines and the sands in which we find the gas.

Q. Have any of the other companies any known methods?

A. There are a few companies, I believe, who operated formerly as artificial plants, who have holders which have a small percentage of storage capacity. And, as stated, I believe, the first, second or third day, there are only the two localities, I believe, where they have been putting the gas back into this locality, and later on taking it out again. At least, I am so told it is possible for them to do it. There is no storage otherwise.

Q. Now, then, in describing the drainage upon the sand, you confined yourself to other companies. What about individuals owning gas wells that sell their product to industries?

345 A. I stated, of my own knowledge, we have quite a few industrial consumers who are securing at least a portion of their supply from sources other than our own, that gas coming from the same fields in which we operate. There are also various oil companies——

Q. Wait a moment. I want to get that first. These other sources that you refer to are companies and individuals engaged in the business of drilling for oil and gas, but who have not engaged in the business of supplying gas to consumers generally, are they not?

A. The major portion of that gas comes from people, as I stated, who drill primarily for oil, and who secure the gas, and desire to dispose of it. In other instances, the industrial consumer himself has gone out and drilled wells for his own supply, to help furnish his own supply.

Q. Now, what are the facts in relation to the Carnegie Natural Gas Company, as to the main purposes for which they procure their gas?

A. Carnegie Natural Gas Company sells or retails some gas which it produces. The major portion of their gas produced is piped to various steel plants, the Carnegie Steel Company.

Q. Is the Carnegie Natural Gas Company one of the constituents of the United States Steel Corporation?

346 A. I am told so, yes, sir.

Q. And it produces gas for use in some of its plants?

A. Yes, sir.

Q. Does the Carnegie Natural Gas Company operate in any of the fields in which your company operates?

A. It does.

Q. And has gas production in those fields?

A. It has.

Q. In your examination yesterday, you were asked about the pressures at the various compressor stations, and you stated the maximum pressure at some of the stations in West Virginia was 300 pounds, and the maximum pressure at some of the stations in Pennsylvania,—one station particularly, as I remember,—135, and another 65. Will you explain why that variation?

A. The compressor station at which I designated the discharge pressure at 135 pounds, referred to the Waynesburg compressing station. In designing units for a compressing station, various conditions and facts are taken into consideration and weighed carefully. The discharge pressure, the side of the engines, the weight of the engines, their intake and discharge pressures, are considered. At the Waynesburg compressing station, it being believed that that gas—

the point of delivery of that gas having been taken into con-
347 sideration, it was believed that a discharge pressure of 130 or 135 pounds was ample to carry that gas to market. The discharge pressure at which it is safe to discharge gas, depends on the thickness of the iron or metal, and its construction, so as to resist that internal pressure. The station which you say 65 pounds—my recollection was 50 or 55 pounds—referred to our Slippery Rock compressing station. As that gas is closer to market, the facts all being considered, depending upon those conditions, I presume that the station was constructed with the idea of having in mind a discharge pressure of 55.

Q. The compressor stations in West Virginia to which you referred were built later in point of time, were they not, than those at Waynesburg and at Slippery Rock?

A. I think the Slippery Rock station, the history as I have it, is perhaps older; and I believe the Waynesburg station was constructed perhaps a year, maybe longer, before the other stations. My recollection of that is a little indefinite.

Q. What are the other purposes for which compressor stations are designed besides that of compressing gas so as to enable the same to pass through the lines to greater distances?

A. Before compressing stations were constructed, the rock
348 pressure, or the pressure on the gas at the mouth of the well or in the gas producing sands, was the pressure which conveyed the gas to the point of consumption. The lower this rock pressure, or this pressure at the mouth of the well, was reduced, the larger quantities of gas the well was capable of producing. I mean by that, that a well whose rock pressure is over 200 pounds would be capable of producing some gas above 200 pounds' pressure. If that pressure was reduced, say to 30 or 40 or 50 pounds, the well is capable of producing more gas at that time. Again——

Q. Now, just a moment. I don't believe you said there what you wanted to say. You referred to the pressure at the mouth of the

well; don't you mean the pressure in the line against which it is putting in gas?

A. I referred to the pressure which would be on the gas contained in the line at the mouth of the well.

Q. That is it, yes. Go ahead.

A. Again, there are some wells where the rock pressure is not high enough or sufficient and capable of forcing gas out of the well and into the line, due to the fact that the pressure of the gas in the line is higher than the rock pressure in the well. By the installation of compressing stations, the pressure in the line on the gathering lines leading to these wells is reduced, and it permits wells to feed
349 in more gas than they would otherwise.

Q. Then, as I understand you, one of the effects of the operation of compressor stations upon the lines is to reduce the pressure upon the intake back of the compressor station and on the gathering lines; that is the fact, is it?

A. That is correct.

Q. And that enables the wells to put more gas into that intake or into those intake lines or gathering lines?

A. Yes, sir, it does.

Q. The lower that pressure, I suppose the more the wells will put into the lines, depending upon the pressure in the wells and the rock pressure in the wells?

A. Yes, sir. There is a still further use for compressing stations, as it obviates the necessity of expenditure of large sums of money in the way of providing additional lines, additional carrying capacity.

Q. Prior to the introduction of the compressor stations, the method pursued in the art or industry of natural gas transportation was to instal lines of larger diameter, was it not, in order to carry the gas to market?

A. I presume that that question was given consideration in arriving at what was the proper size line to construct.

Q. What is the largest diameter of any of the lines on your system?

A. I believe 20 inch.

350 Q. Twenty inch?

A. Is the largest we have.

Q. That was constructed, was it not, prior to the introduction of the compressor stations?

A. It was.

Q. In your cross examination you pointed out on the map certain compressor stations located at different points upon the lines, and you were asked as to what points of consumption upon your lines those compressor stations supplied; I would like you to refer to the map and give us the names and general location of each compressor station, beginning at the most southerly compressing station upon your lines in West Virginia.

A. The most southern location of any compressing station owned by our company is the Sedalia compressing station, located in the northeastern part of Doddridge County, West Virginia. The next compressing station owned by the company is that called Porters

Falls compressing station, and is located in the southwestern part of Wetzel County, West Virginia. The next compressing station is that known as the Hundred compressing station, and is located in the northeastern part of Wetzel County, West Virginia. The next is named the Rosby Rock compressing station, and is located rather in the southwesterly part of Marshall County, West Virginia.

351 The next compressing station is that known as the Waynesburg compressing station, located a little north and east of the center part of Greene County, Pennsylvania. The next compressing station is that known as the Majorsville compressing station, located practically on the dividing line between Washington and Greene Counties, Pennsylvania. The next compressing station is the Gayman compressing station, which is located in the southeastern part of Washington County. In the northern district, we have the station known as the Slippery Rock compressing station, located in the eastern part of Lawrence County, Pennsylvania.

Q. Are there any other compressing stations upon your lines which are not now in use?

A. There are.

Q. What are they?

A. There is one known as the Connor's compressing station, located in Washington County, Pennsylvania, and one known as the Groveton compressor station, located in Allegheny County, Pennsylvania.

Q. Are the lines connecting your system of gas transportation to these respective compressing stations all connected into one system?

A. They are all connected together.

352 Q. And when these compressing stations are in operation, what is the effect thereof on the entire system, with reference to the influence of each of these stations?

A. The gas is permitted to discharge from the various compressing stations, enters the main lines at that point, and goes to whatever source it moves to.

Q. Do these compressor stations when in operation, therefore, all of them, affect the gas in the entire system?

A. Any station operating, or not operating, would have its influence on the general system.

Q. The gas throughout the system, if I understand you correctly, passes back and forth according to the point of lowest pressure upon the line?

A. Yes, sir.

Q. And is influenced by the operation of any one or all of these stations?

A. As stated, any station operating or not operating would affect the flow of the gas.

An adjournment was here taken until Thursday, June 3, 1920, at 10 o'clock, A. M.

353 Thursday, June 3, 1920.

And now Thursday, June 3, 1920, the hour of 10:00 o'clock A. M. having arrived, hearing resumed pursuant to adjournment; the Commissioner and counsel present as noted at last session.

H. A. QUAY recalled.

Mr. Weil:

Q. Now, Mr. Quay, while we are upon this distributing system about which you testified yesterday: You covered it to some extent, but I would like again to have you show to us the lines that supply the Panhandle of West Virginia,—where they come from and where they cross the state lines.

Mr. Hoffheimer: We object to that, because it is repetition.

Q. Make it brief.

A. Our company has various eight- and ten-inch and other size gathering lines, connected to producing wells and to lines conveying purchased gas in Tyler and Wetzel Counties, West Virginia.
354 The gas conveyed through those lines enters our Porters Falls compressing station, located in the southwestern part of Wetzel County. After passing through the Porters Falls compressing station, it enters either an eight or two other ten-inch lines. There is one eight and one ten inch line which runs in a northerly direction, crossing Wetzel County, West Virginia, and entering Marshall County, West Virginia. The second ten inch line mentioned as being one of the two ten-inch lines into which the gas is discharged from the Porters Falls station connects with a 16-inch line conveying gas which comes from the Sedalia Compressing station, located in the northeastern part of Doddridge County, West Virginia. The eight and the one ten-inch line first described as running northerly——

Q. Now, just a moment. You have gone into that heretofore. I don't want to go into all of those details, because you have already covered most of that in your previous testimony. What I want is just to call your attention briefly—Just point out and name the lines, your lines, that supply the Panhandle of West Virginia, and where they come from. Take, for example, that down here, without describing so many ten-inch or 16-inch line, or whatever they are, and then come over onto Wetzel County, and come over into Pennsylvania, Ohio, and so forth, and give us the lines that go
355 in there, just at the points where they cross.

A. The 10-inch line coming from the Porters Falls station, running in a northerly direction——

Q. Don't go into those details. Just tell what they are. We don't care where they come from. How many 10-inch and how many 16-inch, and so forth, cross over there, and so many over here, and so many over there (indicating)?

A. The 10-inch line from the Porters Falls station, running in a northerly direction through the Panhandle. There is a 16-inch line coming from the Sedalia compressing station, leaves Marshall County, West Virginia, and enters into Washington County, Pennsylvania. At a point in Ohio County, West Virginia, there is a line connected with a line coming from Porters Falls to this line connecting, coming from the Majorsville compressing station, located in Washington County, Pennsylvania. Then in Brooke County, West Virginia, there are two 8-inch lines coming from the State of Pennsylvania, and connected to a 10-inch line running up through the Panhandle district in West Virginia. At a point opposite Costonia, Jefferson County, Ohio, there is a line coming from the Porters Falls station, which leaves the State of West Virginia, crosses the Ohio River, and enters Jefferson County, Ohio. At a place near a point called Turkey Foot, Hancock County, West Virginia, there is
356 an 8, 10 and 12-inch line coming from Pennsylvania, that enters the northeastern part of Hancock County, West Virginia. These three lines mentioned leave Hancock County, West Virginia, at a point known as Chester, West Virginia, crosses the Ohio River, and connects there with another line, previously mentioned, in Columbiana County, Ohio.

Q. Now, in your examination yesterday you said you would produce the form of applications to which you referred in your testimony.

A. Yes, sir.

(Several papers shown witness.)

Q. I show you papers now marked for identification "Pennsylvania Exhibits Nos. 9, 10 and 11," respectively. Are those the applications to which you refer?

A. Yes, sir.

Mr. Weil: We now offer in evidence these exhibits, "Pennsylvania Nos. 9, 10 and 11."

Mr. Hoffheimer: We object to the offer of these exhibits, and each of them separately; first, on the ground that they are self-serving declarations on the part of the Manufacturers Light & Heat Company. Secondly, because they are in contravention of
357 law, and especially the law of the State of West Virginia. Thirdly, because these papers can have no bearing upon the question of the validity or invalidity, enforcibility or lack of enforcibility of the statute herein involved. Fourthly, because the evidence is incompetent, irrelevant and immaterial, and has no bearing on the issues of the case.

The Commissioner: Let the objection be noted and the exhibits taken.

Mr. Weil:

Q. Mr. Quay, in making your requisitions, for the supply of gas under your contract with the Hope Company, have you designated

the amount required for each state, for your domestic consumers in each state of West Virginia, Pennsylvania and Ohio?

A. Yes, sir.

(Paper shown witness.)

Q. I show you a paper marked for identification "Pennsylvania Exhibit No. 12," and ask you if that is a copy of the requisition made upon the Hope Natural Gas Company for the year 1919-1920?

A. Yes, sir.

358 Q. And was this delivered to the offices of the Hope Natural Gas Company?

A. Now, it was mailed them, and having received an answer from them relative to it, I of course have every reason to believe they received the same.

Q. Well, you know that they received it? You discussed it with them?

A. Yes, sir.

Q. Afterwards?

A. Yes, sir.

Mr. Weil: I offer this Pennsylvania Exhibit No. 12 in evidence, and ask to have a copy thereof made by the stenographer and substituted for the original, to be used with like force and effect for all purposes as the original; this being a part of the records of the witness.

Mr. Weil:

Q. You were asked on yesterday or the day before to produce the statement from your records of the City of Bellaire, as to the number of domestic, industrial and miscellaneous consumers, and deliveries, from 1911 to 1919, inclusive. I show you a paper marked for

359 identification "Pennsylvania Exhibit No. 13, and ask you if that is the statement which you promised to secure?

A. Yes, sir.

Mr. Weil: We now offer in evidence Pennsylvania Exhibit No. 13, as showing the number of consumers, domestic, industrial and miscellaneous, and the deliveries to each, during the years 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918 and 1919, at Bellaire, Ohio; being the information requested by counsel representing the defendant.

Mr. Hoffheimer: We have no objection to the introduction of the paper in evidence. I think I am not mistaken in recollecting that this statement was not called for by the defendant.

Mr. Weil:

Q. Mr. Quay, I asked you on yesterday about the effect upon the supply by you of your domestic consumers in Pennsylvania and Ohio, of being compelled to supply, under the proposed West Virginia Act, the domestic consumers only in West Virginia, and not the industrial consumers, and you replied the effect of that would be

to give you a reasonably adequate supply for your domestic
360 consumers in Pennsylvania and Ohio. I ask you now to what date and period did that testimony refer?

A. That would refer to the present time, present conditions.

Q. As to the future or hereafter, it would depend, I assume, on various conditions. What would those conditions be?

A. As to the service we could render our domestic consumers in the states of Pennsylvania and Ohio, provided we were only called upon to furnish gas to domestic consumers in West Virginia, it would depend on various conditions and circumstances. The amount of gas that we might be called on to furnish would be one condition. The time of day would be another. The points on our pipe line in West Virginia, from which this gas would be taken, would be another condition, and it would have an effect as to what service we could render in the States of Pennsylvania and Ohio. The number of consumers, or the number of various companies to whom we would have to furnish gas, who did not have a sufficient supply, would have a bearing on it. The gas available would have a bearing on it. All those conditions would affect what you would be able to do in the way of providing a fairly adequate supply to your domestic consumers in Pennsylvania and Ohio.

Q. You are speaking now, as I understand you, of the conditions that would arise in the event that you were called upon to supply domestic consumers, under the provisions of that act, which
361 were not upon your own lines.

A. Yes, sir.

Q. But consumers upon the lines of other companies or in other towns?

A. Yes, sir.

Q. The testimony you gave the other day, as I understand you, referred simply to the then existing conditions and your own consumers alone?

A. I had in mind that that is what the question referred to; conditions as they are at present, and simply my own domestic consumers now connected to my lines.

Q. In order to correct your geography, I call your attention to your testimony, in which you speak of St. Mary's. You were asked the question, "In Ohio?" and you answered, "Yes, sir."

A. It should have been West Virginia.

Q. Mr. Quay, have you knowledge of the stockholders of the Manufacturers Light & Heat Company, in a general way?

A. I know roughly the number of stockholders.

Q. How many stockholders have you?

A. I think approximately 4,200 stockholders.

Q. What is the largest amount of stock held by any particular individual, company or interest?

A. As far as I know, there is no company that owns any
362 stock; they are all individuals.

Q. And what is the largest amount owned by anybody?

A. That I would be unable to say, I don't know. I know, just in a general way, that there is at least one owns a thousand shares, and perhaps more. I couldn't tell you, Mr. Weil.

Q. Do you know whether any one individual owns as much as five per cent of the stock of the company, of the Manufacturers Light & Heat Company?

A. Five per cent would be how many shares? I don't know. I rather think Mr. Meyran, the vice president of our company, is perhaps the largest stockholder in the same. And I don't know—He owns some—quite a large number of shares. I hesitate to say.

Q. Can you get that information for us after the noon adjournment?

A. The number of shares Mr. Meyran owns?

Q. No, I don't care to have any names of stockholders put in the record.

A. The number who own better than five per cent?

Q. I want the largest stockholders, the number of shares of the largest stockholders, up to, we will say, twenty-five or fifty, without the names of the parties.

A. All right, sir. Twenty-five you say?

Q. Twenty-fiv or fifty, I don't care. Make it fifty, if you
363 can get it reason y.

A. All right.

Q. Do you know whether the Hope Natural Gas Company has any interest in the Manufacturers Heat & Light Company?

A. The only interest that I know at all that the Hope Gas Company could have in the Manufacturers Company is simply that they sell gas to us.

Q. I am speaking now of stock in the corporation.

A. No, sir.

Q. We have a contract in evidence which shows their contractual relations. Has the Hope Company, or have any of its officers, any stock in the Manufacturers Company?

A. No, the Hope Natural Gas Company has not. To state whether any officer of the Hope Company owns stock in the Manufacturers, I would be unable to answer.

Q. Have you had prepared, Mr. Quay, a statement of the average amount of gas used by the domestic consumers on the lines of your company in each of the three states, Pennsylvania, Ohio and West Virginia?

A. I have not.

Q. Will you have such a tabulation made?

A. We can make the tabulation if you want it, of course. We take our sales and divide it; and we have the average for the three states. We can secure that information if you resire it.

364 Q. Mr. Quay, we stated at one of our sessions, after making objections to producing the same, that we would consider whether or not we would give the amount of gas, or the quantity purchased, from the Hope Natural Gas Company, by the Manufacturers Light & Heat Company, from 1910 to the present time; and then placed upon the record our objections, and the reasons therefor, to producing those figures. Without waiving those objections, and still insisting upon the same, but in compliance with the ruling of the Commissioner, I would ask you to give us the amount

of gas purchased from the Hope Company under the contract, for each year, beginning with 1910, the time of beginning of the contract.

A. In the year 1910, the Manufacturers Light & Heat Company purchased from the Hope Company 9,405,015,000 cubic feet. In the year 1911, 10,006,907,000 cubic feet. In the year 1912, 9,026,-131,000 cubic feet. In the year 1913, 9,747,797,000 cubic feet. In the year 1914, 9,282,355,000 cubic feet. In the year 1915, 9,-445,951,000 cubic feet. In the year 1916, 14,215,484,000 cubic feet. In the year 1917 14,687,008,000 cubic feet. In the year 1918, 12,-086,331,000 cubic feet. In the year 1919, 12,268,302,000 cubic feet.

Q. This included all of the gas purchased by you under the Hope contract?

365 A. Yes sir.

Q. Did this include not only that gas furnished to you for domestic consumption, but other gas purchased by you from the Hope Company during some of these years, for the purpose of supplying other consumers?

A. Yes, sir.

Mr. Hoffheimer:

Q. When you undertook to state that you had sufficient gas to supply your domestic consumption in the States of West Virginia, Ohio and Pennsylvania, you were referring under the conditions stated by you to Mr. Weil, in the examination this morning, to the present time?

A. Yes, sir.

Q. That is correct?

A. And as conditions exist today.

Q. What period do you mean to indicate by the present time? This month of June, 1920, or some longer period?

A. I would say any time within the last two or three months.

Q. What is that?

A. Any time within the last two or three months.

Q. Then, by your designation of a present time, you don't mean to include the future?

A. I do not.

Q. When you qualify your statement by referring to pres-

366 ent conditions, you assume that your supply of gas to domestic consumers in the three states is not to be interfered with by the enforcement of the West Virginia statute with which we are dealing in this case? Or, putting it in another way, you are treating a supply free from any influence of the statute itself.

Mr. Weil: This is objected to, as being unfair to the witness, in that the witness covered both contingencies: first, without the operation of the statute, and secondly, with it; and the question is not directed to either one or the other, but possibly includes both, and makes an answer impossible.

Mr. Hoffheimer: Suppose we let the witness determine whether he can answer that.

The Witness: You will have to repeat the question.

(Question read.)

A. Under present conditions, there is no interference with the manner in which we desire to operate.

Mr. Hoffheimer:

Q. Leaving out the West Virginia statute and any influ-
367 ence of that statute, and assuming that you operate your company entirely free from that statute; having regard to your knowledge of the present gas supply and of the conditions which affect it, how long will you have sufficient gas to supply all of the domestic consumers in the three states in the territory now supplied by you, and limiting my question to the consumers within that territory now served by you?

A. In asking that question, you use the word "consumers." Do you mean both industrial and domestic, or simply domestic?

Q. My question was limited to domestic consumers.

A. I would be unable to hazard a guess as to that length of time—depending entirely on many conditions which might enter into the situation, and which of course would affect the time that I might set.

Q. What are those conditions?

A. Those conditions—that condition rather—or the length of time, would depend, to a great extent, on the amount of gas which the company can produce, which it can secure by searching for it. Again, it would depend on the amount of gas that our company was able to purchase. Again, it would depend on the natural growth, or new domestic business, which would come onto our lines. An-
other feature which might and would affect the length of
368 time, would depend on whether or not the use of gas for domestic use would be curtailed. Again, it might depend on whether or not gas would be continued to be sold to customers, perhaps, that are not absolutely domestic consumers, such as apartment houses and bakeries, and special consumers that really are not classed as domestic consumers. Those conditions would affect the length of time greatly that we could render fairly adequate service, or any service.

Q. Then it is true that you are not able to foretell at the present time how long you will have sufficient gas to supply all of your present domestic consumption in the three states with reasonable adequacy?

A. I would be unable to tell what length of time.

Q. You have in mind the contingency that the conditions which you have named may in the future render it impracticable for you to furnish an adequate supply even to your domestic consumers in the three states as a whole?

A. It might, yes, sir.

Q. You regard that as a disagreeable prospect?

A. When the time arrives when we are not in position to render fairly adequate service, I don't believe that any gas man would be pleased.

Q. But I mean that you have in mind that prospect as
369 among the probabilities?

A. As among the possibilities, yes, sir.

Q. Among the probabilities?

A. Yes, sir.

Q. Whether it is a possibility or whether it is a probability will depend upon the length of time——

A. The length of time and conditions.

Q. If and when that time arrives, when you do not have sufficient gas with which to furnish a reasonably adequate supply to your domestic consumers alone in the three states of West Virginia, Pennsylvania and Ohio, what will or can be the method of operation then, from the gas man's standpoint?

A. There have been certain ideas advanced by various gas men.

Q. I want your own.

A. My own—well, sir, I would state then, Mr. Hoffheimer, that it would depend a great deal on the conditions as they existed at that time.

Q. What conditions?

A. As to, for instance, whether or not the domestic consumer, for instance, in Pennsylvania and Ohio, having constant shortages—as to whether or not he was equipped to use substitute fuels. I would say frankly to you that if I was operating a plant and we were receiving our supply, say, from West Virginia or from Ohio, or
from Pennsylvania at that time, the natural tendency would
370 be to supply those nearest the source of supply, would be easier from an operating standpoint. That would be the same conditions, no matter whether it was West Virginia or Ohio or Pennsylvania at that time—whichever place you were receiving a supply of gas. Again, it might be that there would be a field in one state producing gas which customers in that locality could use, which might be available for their use, and not other. It might be necessary to develop some process of manufacturing gas or mixing it. It might be necessary to erect artificial plants. You cannot tell what the conditions will be or what might be devised to take care of and furnish gas,—if not a natural, some other gas.

Q. Well, your gas supply from Ohio has declined, has it not?

A. It has.

Q. Your gas supply from Pennsylvania has declined?

A. It has.

Q. Your supply in West Virginia is declining?

A. It is.

Q. Of the three states, the decline in West Virginia has been the least, has it not?

A. Taking it by states, that is barely possible. I wouldn't want to say that it is so.

371 Q. Putting it in another way, you get your largest amount of gas from West Virginia?

A. If you include gas purchased in connection with the gas which this company produces, itself, the larger portion comes from the State of West Virginia.

Q. And I believe it is your contention that you can't——

A. I will interrupt you. The largest portion of our own production comes from the State of Pennsylvania.

Q. But in the aggregate, taking the purchased and the gas from your own production, the largest amount comes from West Virginia?

A. That is correct?

Q. Take this state of facts: that the largest amount of your gas purchased and produced comes from West Virginia; that the amount of gas produced by you or purchased by you in Pennsylvania declines, as it has declined in the past; that the amount of gas produced by you or purchased by you in Ohio declines, as it has in the past; and that as a result, you do not have sufficient gas in the State of Pennsylvania available for use in the State of Pennsylvania, to give the whole of your domestic consumers in that state a reasonably adequate supply for what you term domestic purposes; what are you going to do then? What can you do, as a practical gas man?

372 A. If I understood the question, it wouldn't—— Was anything said relative to the decline in available gas in the State of West Virginia? Do you mean taking into consideration that we might have a sufficient supply in the State of West Virginia, or be in position to purchase sufficient gas in West Virginia?

Q. Well, take into consideration the fact that you do not have sufficient gas to supply with reasonable adequacy all of your domestic consumers in the State of Pennsylvania—because you do not have sufficient gas. Now, what will you do, or what can you do?

Mr. Weil: This line of cross-examination is objected to, as not being, in the first place cross-examination. Secondly, as lifting the veil of prophecy and looking into the future, upon which the testimony of the witness would be the merest conjecture, and furnishing no information to the court in relation to any controversy here, and without which the witness could not possibly do more than make a wild guess or conjecture, without having data or facts upon which to predicate an answer; and therefore, as lumbering up the record with evidence along involved, tedious questions and

373 answers; argumentative, and of no value in the determination of any question involved here.

The Commissioner: Note the objection and take the answer.

A. As previously stated, when that time arrives, if it does arrive, it would depend entirely on conditions as they existed at that time, and, as stated, exactly what conditions existed at that time would determine the steps that I would take.

Mr. Hoffheimer:

Q. Well, you will have to adopt some method of apportionment, won't you?

A. I would probably begin this operation on the curtailment, perhaps, of gas farthest away from the sources of supply. If there was a method, an approved method and a practical method, of manufacturing gas, I might attempt, if the conditions justified it, manufacturing gas and mixing it with natural gas. If conditions warranted, we might sell a portion of our plants. There are so many things that could enter into what a man would do, Mr. Hoffheimer, and we all live in hopes of developments in the busi-
374 ness, which will affect it, so that I am frank to say that it would all entirely depend upon conditions, as to what I would do.

Q. One way of handling it would be to reduce the territory supplied by you, or to reduce the number of consumers supplied by you, in order to bring your consumption within the bounds of your available gas? That would be one way, wouldn't it?

A. That would be one way, perhaps.

Q. Why do you add the "perhaps?"

A. The number of consumers, Mr. Hoffheimer, doesn't determine the amount of gas that would be used. I mean by that, that five consumers might use more gas in their five homes than 100 or 200 consumers would use in their homes. The number of consumers doesn't determine entirely, or anyways near entirely, the amount of gas which they would use.

Q. Well, using the term "number of consumers" to convey the idea of a body of consumers taking a given quantity of gas, whether they are one or a hundred, your experience enables you to tell with reasonable accuracy what amount of gas will be required and taken by a certain number of consumers in a particular territory?

A. We take the average, or rather we take the amount consumed, and divide that by the number of customers, which gives
375 us the average amount consumed by each consumer for whatever period we are taking.

Q. Now, with that explanation, I wish you would answer my question.

A. If each of your customers consumes a like amount of gas, and some of those customers were discontinued from your lines, the amount of gas the balance would consume would be less, and would be one way by which the situation could be handled.

Q. Another way would be to cut down the amount of territory covered by your concerns?

A. That would lessen the sales of the company and would lessen the amount of gas required to serve those still remaining on your lines.

Q. You can answer this question: One way of handling the situation, if your available gas is not sufficient to cover all domestic re-

quirements, would be to cut down the range of territory served by you? That can be answered yes or no, can't it?

A. No.

Mr. Weil: This instruction of counsel as to the manner of answering the question is objected to. The witness has a right to answer the question in his own way.

376 The Commissioner: Let the witness answer the question and note the objection.

(Question read.)

A. The answer is no. That is, I say no, that I can't answer the question yes or no.

The Commissioner:

Q. Is that what you mean to convey, Mr. Witness?

A. That is what I mean to convey.

Mr. Hoffheimer:

Q. In other words, you can't say that one way of handling the situation would be to cut down the range of territory supplied by you?

A. I could not say that that would not have the effect, by curtailing or cutting down the territory, of rendering fairly adequate service to those remaining, for the simple reason that as your gas continued to decline, you would again have the same conditions, and would again have to restrict your territory, and again restrict your territory, and again restrict it, until there was only one house—

377 or the supply of gas declined perhaps so that only one home could burn natural gas. I mean to say, that would not cure, or render fairly adequate service to those that did remain on the line.

Q. In other words, you are attempting to say that cutting down the territory served by you would not necessarily give fairly adequate service to the consumers who remained?

A. It might for a time, and again it might not.

Q. But cutting down the territory served would, for the time being, give you more gas to supply those who remained, and therefore enable you to give those who remained fairly adequate service, or something approaching it?

A. As previously stated, perhaps for the time, and perhaps not. The chances are it would, at least for the time, provided you cut off a sufficient number of customers.

Q. But as a practical proposition, cutting off a sufficient number of customers would not help you very much, provided those who remained were sprinkled here and there over the whole territory served by you?

A. Read the question and see if I have got you right.

(Question read.)

A. Oh, you mean in the three States?
Q. Yes.
A. Yes, any customer—or any communities which you
378 would cut off, it would leave gas for the use of those that still remained on your lines. As to whether you would render fairly adequate service to those remaining on the lines, would depend on whether or not those who still remained would use the same amount of gas or not, or whether you cut off a sufficient number of customers.
Q. Suppose we leave that, and let me ask you this: Which is the heavier operating expense, a very large and long system of pipe lines with attendant compressors, or a smaller system, assuming that you have the same amount of gas to be supplied?
A. Well, I would answer that question by saying that the earnings doesn't depend on the amount of gas that you have available for consumers. Neither does your expense entirely depend on the amount of gas which you have available for consumers. If all things were equal, you would have more money invested in your larger plant; consequently the expense would be greater on a large plant, provided all things were equal.
Q. In other words, if you had a billion feet of gas to be conveyed through 100 miles of pipe line and supplied to customers scattered all along the way, it would cost you more money per thousand cubic feet,—and it would cost the consumer — per thousand cubic feet, than if that same billion feet were to be conveyed along and distributed to consumers along a pipe line twenty-five miles in length?
379 A. It might; that might be so.
Q. Wouldn't it necessarily be so?
A. No, not necessarily.
Q. Why?
A. It would depend on conditions?
Q. What?
A. Local conditions. For instance, your twenty-five miles of pipe line, the smaller company you refer to, might be entirely under pavement. It might be in a community, for instance, which charges you from five to ten or fifteen dollars for a permit every time you dig in the streets. Your twenty-five miles of pipe line might mean paralleling a river or crossing a river; and if those conditions would exist, your cost of operating might be greater than on your hundred mile pipe line. Then you might have that twenty-five mile pipe line in territory where there are frequently slips, landslides, taking out your lines, and increasing your expense. Those things are possible. So that I wouldn't answer it any other way than I have; that the chances are that it would be less, but it might not be.
Q. All right; suppose your twenty-five miles of pipe line are the first twenty-five miles of your 100 mile pipe line nearest your point of supply. Then what do you say, as to the difference in ex-
380 pense in making that distribution?
A. As I stated before, it would probably be cheaper.
Q. Well, it would be, wouldn't it?
A. It probably would.

Q. All right; then from the standpoint of the operating company, it would be better to limit that supply of gas to the twenty-five miles rather than to the 100, wouldn't it?

A. If you are now referring to my company as it now exists, I would answer no.

Q. Why do you say your company?

A. I suppose that I am here principally for giving evidence as to my own company.

Q. Well, why do you say that in the instance of your company it would not be cheaper?

A. Because I am very familiar with the circumstances and conditions of my own company.

Q. What are the conditions about your company which would enable it to furnish gas to its consumers along a range of 100 miles of pipe line, rather than to furnish that same quantity of gas along the first 25 miles of that pipe line nearest the source of production?

A. We have those lines already laid and in operation. We have contracts with individuals for a supply of gas, and we have
381 spent millions of dollars in constructing that pipe line. If that were to be restricted to 25 miles of pipe line, our investment, I consider, would be of no or little value.

Q. In other words, you think you would be put in the position of charging off all of your investments beyond the 25 miles?

A. As I see it now, if we were to cut those lines off, and not be in position to utilize them and render service to patrons who at the present time are on our lines—as stated to you, our investment I consider would be of no value. That is, that would be an actual loss to the stockholders of the company. The value of their property would be materially reduced.

Q. Well, then, you think this: that as long as you have any gas whatever, it will always be more advantageous to your company to supply it over the whole system of pipe lines now owned and operated by you, than it will be to limit the area in which that same quantity of gas is consumed?

A. There might come a time, and probably will come a time, when it will be impossible to render fairly adequate service to all the consumers who are connected to our pipe lines. I consider that there are things that can be done and no doubt will be done, when
382 conditions arise, which necessitate doing so—steps taken that will work out the problem as it arises.

Q. What steps are practicable?

A. Well, as previously stated, on some of these days that I have been on the witness stand, the only gas sold to industrial consumers is the surplus gas remaining after the requirements of the domestic consumer have been taken care of. Again, I think I have testified to the fact that natural gas for the purpose of cooking, lighting, hot water heating, I consider to be an absolute necessity in the home, under present conditions. But for the heating of the home, I do not consider it an absolute necessity. The curtailing of heating, or if each customer would instal, if he has not already done so, a substitute fuel for heat in times of emergency—that would, in my opinion, put off for a considerable period of time any other further action.

Now, as the time comes, there will no doubt be steps taken, if necessary, to remedy and correct conditions as they occur.

Q. I know, but assuming now that you have cut down your supply, so that it is limited to strictly domestic consumption, and those consumers themselves limited to the use of gas for lighting and for cooking, and still your gas supply is not sufficient to take care of everybody; then I want to know what is the practicable thing?

383 A. As previously stated, it would depend on conditions as they exist at that time, and what steps a person could take to benefit them. The fact is, I believe the situation would practically cure itself. For it is a well-known fact, as previously stated in one of these previous days on the stand here, that every time you have a shortage, the consumer suffers a shortage, he takes steps of his own to provide other means of heating and things of that kind, and doesn't depend on a supply of natural gas as he has in the past. Those shortages, you know, naturally occur at points furthest from the point of production. I might say, on my company, in the state of Pennsylvania, for instance, now the towns furthest away are those who do not have at all times an adequate supply, and they know that, and they put in substitute appliances; while those nearest the source of supply of course are not inconvenienced, they continue to use gas.

Here a recess was taken until 1:30 P. M.

384 Thursday Afternoon.

And now, the hour of 1:30 o'clock, P. M., having arrived, hearing resumed pursuant to adjournment.

Mr. Weil: Inasmuch as the witnesses we had proposed to examine after the completion of the testimony of the witness now on the stand will not be available tomorrow, in accordance with our previous understanding—as we have not heretofore had sessions on Saturday—I would suggest that upon the adjournment this afternoon we resume the taking of testimony on Wednesday, June 9, 1920, and continue to Saturday, June 12, 1920, inclusive, and then resume the taking of testimony on Monday, June 28, 1920, continuing consecutively for two weeks, if that time suits the convenience of counsel for the defendant.

Mr. Hoffheimer: If the dates indicated by counsel for the complainants are those upon which he desires to proceed with the taking of further evidence, counsel for the State of West Virginia will adjust their engagements in accordance therewith.

385 It is stipulated and agreed between counsel representing the complainants and defendant that no other or further notice of the taking of testimony upon the dates above mentioned need be made, but acceptance of notice for said dates is hereby made.

H. A. QUAY resumed the stand.

Recross-examination.

Mr. Hoffheimer:

Q. Where do the gas main lines of the Equitable Gas Company cross the boundary line of the State of West Virginia?

A. I would be unable to give the location, only in a general way.

Q. How many crossings do you personally know of?

A. That I personally know of, of the companies I named in my prior testimony, I would say none, if you mean direct personal knowledge and having been on the ground; as stated at the time I gave the evidence, my knowledge was by information, and so forth.

Q. When you gave your statement upon information, what particular place or places did you have in mind as to the
386 place of crossing the boundary line of the State of West Virginia by the Equitable Gas Company?

A. In our conversation with this particular officer of the Equitable, or Philadelphia Company, he referred to the points where his pipe lines cross between the States of Pennsylvania and West Virginia.

Q. Who was that officer?

A. Mr. McCloy.

Q. Officer of what company?

A. At that time he was general manager for the Philadelphia and Equitable companies—gas companies.

Q. What was the information as to the place or places of crossing?

A. Oh, I don't recollect in a very definite way. We were talking about my own pipe lines, I believe, showing him all our lines that cross and recross the various state lines, and he made the statement that his system was not connected in that manner, but that—And he stated to me the places—I forget the places at which his lines cross into the state of Pennsylvania—but in the conversation he stated the location of them, about them crossing the lines, state lines.

Q. How many places did he indicate?

A. That I don't particularly retain; it would be guesswork as to the number.

387 Q. Do you remember the places at all?

A. I do not, as previously stated. I am frank to say, though, that I know this much about the number of lines, that it did not equal the number of places at which our company crosses and recrosses. If it had, I believe I would have retained it in my recollection.

Q. Did he tell you how far the lines of the Equitable Gas Company penetrated the State of West Virginia?

A. No. He gets gas delivered close to the state line between the two states.

Q. Then all your testimony about lines of the Equitable Gas Company was based on that conversation?

A. As stated at the time I gave the evidence.

Q. When did that conversation take place?

A. Oh, I would say that that is a year or year and a half ago, somewhere in that neighborhood.

Q. What was that gentleman's name?

A. McCloy—Walter McCloy.

Q. Where does he live?

A. He lived in Pittsburgh at that time.

Q. What does he do now?

A. That I am unable to answer; as I am informed, at least, he left the Philadelphia and Equitable Companies, and has associated himself with another firm, I believe, which operates in the west.

388 Q. What company were you informed?

A. I don't know whether I am quite correct or not; I was given to understand it was with Guffey.

Q. Mr. Joseph Guffey, formerly president of the Philadelphia Company?

A. Philadelphia and Equitable Companies, yes, sir.

Q. Where do those lines cross of the Carnegie Natural Gas Company?

A. I don't know, from personal knowledge, the points where they cross.

Q. Your testimony with regard to the Carnegie was based on a conversation with somebody?

A. It was.

Q. With whom?

A. With Mr. Samuel Meals.

Q. What office does Mr. Meals hold in the Carnegie Natural Gas Company?

A. I believe he is general manager. He might be vice president and general manager, or he might be vice president.

Q. How long ago did that conversation with Mr. Meals take place?

A. I would say within the past year.

Q. At how many places does the Carnegie cross?

A. To answer that with any degree of certainty, I would be unable to do so. I would answer that in the same manner,

389 that I know it did not come near the number of crossings which my company has.

Q. And in the same way, I suppose, you are not able to give us any place of crossing?

A. No; I don't recollect the names at the point where it crosses.

Q. You will not undertake to state there is more than one place, will you?

A. It is my recollection, yes, sir, that there is more than one place.

Q. Well, how many?

A. I have previously stated I would be unable to answer that, as I don't know definitely, other than it was not as many times as our company crosses and recrosses.

Q. Well, where did you get your information in regard to the crossings of the United Fuel Gas Company?

A. Through information and conversation, and from being shown their maps.

Q. From Mr. Harry Wallace?

A. Harry Wallace was one, yes, sir.

Q. How many places do the lines of the United Fuel cross?

A. That I would be unable to answer, as I have not a direct recollection as to the number of places.

Q. Nor the particular places?

390 A. Nor the particular places.

Q. How long ago did you have that talk?

A. Oh, I would say that was within the last nine months.

Q. Now, with regard to the Equitable, the Carnegie and the United Fuel Gas Companies, what did you mean to state, that these main lines cross the boundary between West Virginia and adjoining states?

A. With the Equitable Company, as stated, I associated the name of the Philadelphia Company with it. I don't know whether their company in West Virginia is called the Equitable Gas Company or not—I mean, property owned by them. I mean to say that, as previously stated, on information, to the best of my belief, they cross the state lines, yes, sir.

Q. Well, that is what you meant, that the lines of those companies leave the State of West Virginia and cross into Pennsylvania or Ohio—adjoining states?

A. Or Kentucky—some states, yes.

Q. That is all you meant to imply?

A. That is all I believe my testimony referred to.

Q. What was it you told us about the use of gas by the Carnegie Natural Gas Company?

A. I stated, I believe, yesterday, that the Carnegie Company supplies some domestic,—or serves gas—delivers gas to some

391 consumers on their lines, and also furnishes gas to the Carnegie Steel Company. When I refer to the Carnegie Steel Company, of course I mean the United States Steel Company—or whatever its parent name is.

Q. Carnegie Steel Company is a subsidiary of the United States Steel Corporation.

A. That is my belief.

Q. Where did you get this information as to the service to consumers along the line?

A. Through information, conversations—talks that I have had. I also saw a report, I believe, of the amount of gas they sold in West Virginia. So I take it from that too that they have customers that they sell gas to.

Q. Well, you saw and heard that the Carnegie Natural Gas Company was furnishing about 250 domestic consumers in the State of West Virginia?

A. As to the number,—I have no recollection of testifying as to the number. I would be in no position at all to state whether they had 250 or 10,000.

Q. Then, in the same way, you don't know how many there are in Pennsylvania—domestic consumers?

A. Of the Carnegie Company?
Q. Yes.
A. No, I would be unable to answer that.

Q. How does the Carnegie Steel Company use that gas
392 furnished by the Carnegie Natural Gas Company?

A. That I would be unable to answer, as I am not the party that makes the deliveries to them, and of course as a result of that, would have no connections with their customers. Never had any occasion to visit the premises upon which they deliver gas.
Q. And your search for information did not extend so far?
A. I have no recollection of stating that I searched for information.
Q. Well, your acquisition of it.
A. I stated that I had received what information I had through conversation and talks.
Q. What is the business of the Carnegie Steel Company?
A. The manufacturing of iron and steel products.
Q. It is one of the largest constituent plants of the United States Steel Corporation?
A. It is so considered.
Q. When you withdrew your industrial classifications then in West Virginia, Ohio and Pennsylvania, on January 21, 1918——
Mr. Weil: No, January 1st.
The Witness: It became effective as of January 1, 1918.

393 Mr. Hoffheimer:

Q. Have you furnished any industrial gas since?
A. Yes, sir.
Q. Well, how did you happen to do that if you took the trouble to withdraw your industrial classifications?
A. We stated in the letter which was mailed to each of those consumers—in the letter stated certain facts, and plainly stated that we would be willing to sell and would undertake to furnish such amounts of gas as we had for certain uses for which they might desire to use gas. That that supply which they were to receive would be from surplus gas which we had remaining after the requirements of the domestic consumer had been taken care of.
Q. That does not answer the question; I don't care what you wrote to industrial consumers. I am asking you how it happened that after you had taken the trouble to withdraw your industrial classification, you then circularized the community and continued to sell industrial gas?

Mr. Weil: This is objected to as being a mere repetition of the same examination, on the same subject as the cross examination, and it has been covered and explained in detail several times; and further objected to as being an unfair question, there being
394 no basis of fact in the record to justify the assumption in the question of taking the trouble to circularize after the classification had been withdrawn,—as a matter of fact, the record shows

the circularization, so-called, was done prior to the time of the withdrawal of the classification, in the notice that the classification would be withdrawn, and stated the terms and conditions upon which gas would be supplied out of the surplus, if possible, to the industrial consumers.

The Commissioner: Note the objection.

Mr. Hoffheimer:

Q. Have you adopted Mr. Weil's answer as your own, Mr. Quay?

A. What am I to do about it? Answer your question now?—What is the question?

Q. (Repeated.) That does not answer the question; I don't care what you wrote to industrial consumers. I am asking you how it happened that after you had taken the trouble to withdraw your industrial classification, you then circularized the community and continued to sell industrial gas?

A. I see no reason why we should not continue the sale of industrial gas at times when we have a surplus remaining above
395 the requirements of the domestic consumer.

Q. Then you have continued to furnish as industrial gas what has been a surplus, since that time—up to the present?

A. We have continued to sell whenever we had available gas for that service, out of the surplus gas.

Q. And in each instance, no doubt, you have made a special contract with each consumer?

A. We have an individual contract with each consumer.

Q. That contract, without going into the particular terms of it, embraced the conditions of service and the charges to be paid by the consumer?

A. It contained the prices and certain rules and regulations covering the delivery of gas to them.

Q. Well, what have you been charging these individual industrial consumers since January 21, 1918?

A. Different prices. If you state what location you desire the price, I will endeavor to report it.

Q. Who are these industrial consumers to whom you sent the circular letters to which you testified?

Mr. Weil: Do you mean——

Mr. Hoffheimer:

Q. In West Virginia.

A. We mailed each industrial consumer one of those notices.

396 Q. Who were they?

A. Do you wish the names of some of those consumers specified?

Q. Yes, sir.

A. I will start with Taylor—Smith & Taylor——

Q. Just tell us where they are, as you go along?

A. Yes. At Newell,—or Chester, West Virginia. You want just the larger ones, or those I can remember or recollect offhand?

Q. Yes, go ahead.

A. The Homer Laughlin China Company, at Newell—I will endeavor to name at least one in each town; Follansbee Bros., Follansbee, West Virginia; the Wheeling Steel & Iron Company, at Wheeling; Fostoria Glass Company, at Moundsville; United States Stamping Company, at Moundsville; New Martinsville Glass Company, at New Martinsville, West Virginia; Weirton Steel & Iron Company, at Weirton, West Virginia. Is that sufficient?

Q. Perhaps you might give us a few more.

A. All right. I will have to just kind of think a little bit—the La Belle Iron Works, at Wheeling; the Whitaker & Gloeschner, at Wheeling; Crescent Glass Company, at Wellsburg, West Virginia;
Eagle Glass Company, Wellsburg, West Virginia; Knowles-
397 Taylor & Knowles Pottery Company, at Newell, West Virginia. Is that sufficient?

Q. Yes. Did all of your industrial consumers in West Virginia, to whom you addressed these circular letters, respond?

A. I don't have any recollection otherwise.

Q. Well, did all of them continue to take industrial gas after January 21, 1918?

Mr. Weil: January 1, 1920, he said.

Mr. Hoffheimer:

Q. January 21, 1918.

A. Which is it, 1918 or 1920?

Q. Well, the date when you withdrew your industrial classification.

A. I know of none who have discontinued on our lines. There might have been a few. I have no recollection of any which left or were discontinued from our lines.

Q. You cannot give us any names?

A. No, I don't recollect of a one, no, sir.

Q. I wish you would turn to the circular letter of June 30, 1917, Pennsylvania Exhibit No. 2—I notice in the schedule of rates a blank left as to the price per thousand cubic feet. What was
398 inserted in the letters you actually sent out to these industrial consumers in West Virginia and Pennsylvania?

A. If you refer to different localities you might have that apply to, I might be able to tell you.

Q. Well, all right. Take first the circular letters of that date sent to industrial consumers in Pennsylvania, if that subdivision will enable you to answer it.

A. I don't know the rate, other than the first 250,000 was the regular domestic rate of the company being charged at that time, less—or no, it would be one cent more—The rate for the first 250,000 cubic feet was the same rate at which gas was sold to the domestic consumer. From that point down, the rates were less. As to the actual price we charged on June 30, 1918, I wouldn't care to

quote those prices, unless I ascertained through looking at it and being correct in the matter.

Q. Can you give us any typical instance, as, for instance, in Pittsburgh or some other locality served by you in Pennsylvania, with respect to the price inserted for the first 250,000?

A. That was, I think—and I think I am correct—36 cents, with a discount of one cent per thousand cubic feet—No, I will take that back,—30 cents, 31 cents, with a discount of one per cent
399 per thousand cubic feet, if paid on or before the expiration of the discount period. We might shorten this, Mr. Hoffheimer,—The reason that the space was left blank is because we have three different zones,—southern zone, middle zone and northern zone. The price varies in the three different zones. This letter which you refer to was a circular letter printed, and a space left blank, so that the form could be utilized in the three zones, by the simple inserting of the price which applied to that particular zone.

Q. What were those zones you are talking about? Where were they?

A. The southern zone is entirely, I believe, within the state of West Virginia, more particularly as to communities, say at New Martinsville, in that section of the state. The middle zone represents communities located in and about Wheeling, West Virginia. The northern zone refers to communities such as Wellsburg, Newell and Chester, in West Virginia, and the whole state of Pennsylvania. And in Ohio,—the territory in Ohio opposite New Martinsville is in the southern zone, the territory in Ohio opposite Wheeling is in the middle zone, and the territory opposite Wellsburg and Newell and Chester, Ohio, is in the northern zone.

Q. So that the initial rate of 30 cents net for the first
400 250,000 feet which you have given me was the rate for the——

A. For the northern zone.

Q. Northern zone?

A. Yes.

Q. Can you give us a typical instance in respect to the middle zone?

A. I believe it was 28 cents net.

Q. How about the southern zone?

A. It was my recollection it was 24 cents net.

Q. And has that zone system been pursued similarly since?

A. Yes.

Q. When did you say all of your industrial contracts were cancelled?

A. I presume you refer to the last cancellation or change?

Q. Yes.

A. It went into effect on the 5th of March, 1920,—as of the 5th of March.

Q. How many times did you cancel it?

A. I think one time prior to that, at least. You mean, in the period of time between January 1, 1918, and the present date?

Q. Well, if you cancelled them——

A. Every time there is a new contract entered into, the old contract is cancelled.

Q. Then by "cancellation," in fact, before March 5, 1920,
401 you merely intended to state that the contracts which existed before that date became ineffective when a new set of contracts went into effect?

A. I did not so testify.

Q. That is what I am trying to get at, what you did not testify?

A. Just what I did testify to, if you refer to my testimony at previous periods in the hearing——

Q. Well, have you had any industrial contracts effective since March 5, 1920?

A. We have.

Q. When did they become effective?

A. They became effective the 5th or 6th of March, 1920.

Q. How long did they run?

A. Then run for a period of thirty days and as long thereafter as mutually agreeable, subject to cancellation on the part of either party on thirty days' written notice.

Q. Where was that that sulphur gas got into your lines?

A. On our discharge line leading from the Hundred compressing station.

Q. How did it get in there?

A. As to how it got in there, from my own actual personal knowledge, I am unable to state. It is my belief that it was gas which was delivered to us under a gas purchase contract.

402 Q. With whom?

A. I definitely would be unable to tell that perhaps. It is my belief that it came with gas which was delivered from the Hope Gas Company.

Q. When did that occur?

A. Oh, I would say within a period of perhaps two years ago.

Q. Over what period did it extend?

A. It extended over a comparatively very short period of time.

Q. Can you give us some idea?

A. Oh, I would say that my attention was called to the matter first from an odor in the compressing station, which I paid very little or no attention to, for perhaps a few days, maybe a week. Then various agents and foremen would call me and complain, or state that certain consumers had complained, as to a peculiar odor of gas—and sometimes, for instance, like today perhaps, the agent at Sewickley would call me relative to complaints that he had received, or it might be a call might come in from Steubenville, Ohio. I had one call or two, at least, from New Castle, Pennsylvania. I personally investigated, and it did have at Sewickley a rather peculiar odor—I would say, from start to finish, perhaps a month.

Q. Whenever attention was called to it, in regard to the
403 three places you have mentioned?

A. No, I don't mean to confine myself to the three places that I have mentioned. Other places made complaints. As previously testified to, not on some days,—they might notice that odor

in the gas today and might not notice it tomorrow, or it might come back the next day. That was the manner in which it acted. Other communities also. For instance, Bellaire, Bridgeport, in Ohio—I believe I even had one or two complaints in Pittsburgh here. I don't mean to confine it to three localities at all.

Q. Those are all you remember at the present time?

A. Oh, I would say yes.

Q. Well, if you remember any others, tell us.

A. You mean than the three?

Q. Those you have named specifically?

A. No, I would not want to say that right offhand. Those are the principal points from which complaints came. I received a complaint from Ambridge, down the Ohio River. I sent down and had a sample of that gas taken; I believe I had several samples taken at different points.

Q. Where were these samples taken?

A. They were gas taken from the pipe lines.

Q. At what points?

A. Say Ambridge for one, and Sewickley for another, and Steubenville, Ohio, for another; I don't recollect offhand whether
404 I got a sample from New Castle or not, I believe I sent a container for it, and it ceased to exist there, something of that sort. I don't recollect whether I got a sample from New Castle or not.

Q. Sewickley is a suburb of Pittsburgh?

A. Pittsburghers are glad to believe so; it is about twelve miles from Pittsburgh.

Q. Well, you wouldn't want to reverse that statement?

A. I would like to; it is a nice place to live.

Q. What was that sulphur gas, artificial gas?

A. All I know about it is that the people who examined it claimed that it contained sulphur, yes.

Mr. Hoffheimer: There are several items which have been called for by counsel for the complainants on re-direct examination which have not yet been produced by Mr. Quay. We may desire possibly to cross examine on them when they are produced, but for the present we have nothing further.

Mr. Weil:

Q. Mr. Quay, I asked you this morning, I believe, to secure a list of a number of the largest holdings of stock of the Manufac-
405 turers Light & Heat Company. Did you procure that information?

A. Yes, sir.

Q. Have you that with you now?

A. I have. (Producing paper.)

Q. What is the capital stock outstanding?

A. The capital stock outstanding is $23,000,000.

Q. Of that amount the Company itself holds $469,600, as shown by its annual report of December 31st, 1919, does it not?

A. Yes, sir.
Q. Have you there the list of the sixty-there largest stockholding accounts in the company?
A. I have.
Q. Showing the number of shares held by each of those sixty-three stockholders?
A. Yes, sir.
Q. What is the largest individual holding of any?
A. 11,141 shares.
Q. Those shares are par $50?
A. Par $50.
Q. That would be $557,050, then, of the capital stock?
A. It would be fifty times 11,141.
Q. Now, this statement shows the total of those sixty-three accounts of the largest holdings to be 142,449 shares, does it
406 not?
A. Yes, sir.
Q. And the balance of stock outstanding is in 4,107 additional stockholding accounts; and the total number of stockholders is 4,170?
A. That is correct.

(The statement just referred to, showing by figures only, the sixty-three largest individual holdings of stock of the Manufacturers Light & Heat Company, was here marked as Pennsylvania Exhibit No. 14).

Mr. Weil: In connection with the testimony of the witness, and as showing the number of shares held by each of the sixty-three stockholders, I offer Pennsylvania Exhibit No. 14 in evidence.

Mr. Hoffheimer:

Q. This Pennsylvania Exhibit No. 14, just offered in evidence, relates to holdings of stock of your company as of March 31st, 1920?
A. That is correct.
Q. That indicates nothing as to holdings on any other date?
A. I believe that record is furnished you from data as the
407 books stood March the 31st, 1920.
Q. Your stock ownership changes from time to time in individual instances, does it not?
A. The stock is listed on the Pittsburgh Stock Exchange, and there are very frequent sales, so I would say that the stock ownership changes from time to time.
Q. And in a number of instances, such as is common with other listed stocks, they are held by purchasers without transfer on your corporate books?
A. That you are asking something of which I wouldn't have knowledge.
Q. That is what I was trying to get at, that the mere fact that your stock books show particular holdings does not indicate in the instance of your company, any more than any other, the actual ownership or holdings of stock, does it?

A. I could only answer the question by saying that if the books showed people owning the stock they would own it.

Q. Who is this owner of 11,141 shares?

A. That I don't know.

Q. Can you give us the name of the holder of any of these items of sixty-three holdings you have listed?

A. To say with any degree of certainty, no,—unless one,
408 there might be one there which might represent stock which I own—or will own when it is all paid for.

Q. Well, aside from this statement of individual holdings, can you tell us the names of any stockholders as of March 31st, 1920?

A. None, only from hearsay. I believe my stenographer is a stockholder of the company. I believe—have reason to believe—that a good many of the employees of the company are stockholders of the company; but whether they have all sold their stock or not, I don't know; a great many of them are, or were stockholders of the company.

Q. I suppose that your officers and directors are stockholders?

A. I know Mr. Gill, the President, is a stockholder; Mr. Ratcliffe owns some stock; I believe Mr. Meyran owns some.

Q. Well, who are your directors?

A. There are twelve of them. Do you want me to name them?

Q. Yes.

A. William Flinn, John E. Gill, E. H. Jennings, John M. Reed, P. C. Beers, J. I. Buchanan, John W. Donnan, A. E. Succop, James P. Eagleson, J. W. Gill, L. A. Meyran, and C. F. Niemann.

Q. How were the stocks of the Manufacturers Light and Heat Company held in 1915?

A. You mean as to the number of stockholders?

Q. Yes, sir, and the size of the holdings.

409 A. That would be a mere guess. I simply wish to state that the list of those sixty-three names was information to me, and confirms my belief, as I have stated several times, that I rather dislike to guess as to figures or conditions without having and knowing that I have a definite knowledge as to about the correct circumstances or figures which you ask me for.

Q. And the same would apply to the year 1910?

A. The question of stock ownership is one that does not come under my jurisdiction, and, of course, would be completely out as to any direct knowledge, any more than I meet a great many stockholders who come in and state that they are stockholders and talk over business, and so forth.

Q. Who is the officer of your company that has direct knowledge of those matters?

A. The record of stock ownership is not kept, I believe, by any officer or by my company. I believe that is in the hands of the Colonial Trust Company.

Q. So that any information you have given as to stock holdings, with the exception of yourself and your stenographer and certain employees of the company, is based upon information received from the Colonial Trust Company?

A. I did not so testify.

Q. I do not accuse you of that, but I want to know the fact.
410 A. I stated that the record of stock ownership is not kept by any officer of the company, is my belief. That is kept by the Colonial Trust Company. The information I have, as stated to you when you referred and asked me as to those persons who I knew owned stock, I stated I knew that my stenographer did, and I have been told that others, that I named some, did, in addition to employees of the company.

Q. Well, you are well acquainted with Mr. John G. Pew?

A. I am proud of it.

Q. Was Mr. John G. Pew at any time a stockholder of the Manufacturers Light and Heat Company, to your knowledge or information?

A. I will answer that question in this way: That I have had opportunity of once or twice looking over the record, and I do not recollect of John G. Pew's name being on the list of stockholders. He might be, but not to my recollection.

Q. To your knowledge or information, was Mr. John G. Pew ever an officer or director of the Manufacturers Light and Heat Company?

A. To my knowledge, he never was.

Q. How about Mr. John L. Porter?

A. The same thing would apply—in fact, I don't know John L. Porter, only by representation. The same answers would apply to John L. Porter, any more than this exception: I have no recollection of making an investigation to see if John Porter owned any
411 stock—in fact, I made no investigations, just casually looked over the list.

Q. I didn't ask you about the stock ownership of Mr. Porter, but whether he was an officer or director of the Manufacturers Light and Heat Company at any time, to your knowledge or information?

A. Not to my recollection.

Q. And the same in regard to Mr. George W. Crawford?

A. Now, I am told that Mr. Crawford is a stockholder of the company. Whether that refers to George Crawford or not, I don't know, or some of the other Crawfords; there are Crawfords who are stockholders, I believe. As to his being an officer of the company, I have no recollection of him ever being a director or stockholder—not during my time, at least, with the company.

Q. Who preceded you in the office of General Manager of the Manufacturers Light and Heat Company?

A. Mr. M. B. Layton.

Q. How long was he general manager?

A. I think he was general manager eight months.

Q. Who preceded Mr. Layton?

A. Mr. T. O. Sullivan.

Q. How long was he general manager?

412 A. I believe he has been—was general manager from some time in August, 1910, on.

Q. Up to the time Mr. Layton took office?

A. Mr. Layton succeeded Mr. Sullivan.

Q. That was the time when Mr. Sullivan became Vice-President and General Manager of the Hope Natural Gas Company?
A. That is correct—about that time, at least.
Q. I mean, it was to fill that vacancy?
A. Yes, sir.

Mr. Weil: In the examination this morning the witness was asked by me to have prepared a statement showing the average consumption of the different domestic consumers in the respective States of Ohio, Pennsylvania and West Virginia; he has informed me that, in order to prepare this, it would involve an examination of an immense amount of data, and for the present I have instructed him it was unnecessary to prepare that data accordingly. I have no present intention of having prepared or offering the same.

An adjournment was here taken until Wednesday, June 9th, 1920, at 10:00 o'clock A. M.

ORIGINAL, #20 & #21.

October Term, 1920.

THE COMMONWEALTH OF PENNSYLVANIA

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO

vs.

THE STATE OF WEST VIRGINIA.

Proceedings of June 9th-12th, 1920.

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413 Wednesday, June 9th, 1920.

And now Wednesday, June 9th, 1920, the hour of 10:00 o'clock A. M. having arrived, hearing resumed pursuant to adjournment.

Present: The Commissioner, Levi Cooke, Esq.; A. Leo Weil, Esq., on behalf of The Commonwealth of Pennsylvania; Freeman T. Eagleson, Esq., on behalf of The State of Ohio; and Messrs. Hoffheimer, Steptoe, Blue, and John on behalf of The State of West Virginia.

T. O. SULLIVAN, a witness produced on behalf of the Complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Weil:

Q. Mr. Sullivan, where do you reside now?

A. In the city of Pittsburgh, Pennsylvania.

Q. And what is your present position in connection with the natural gas business?

A. I am Vice-President and General Manager of the Hope Natural Gas Company.

Q. How long have you held that position?

A. Since July 1st, 1918.

Q. Prior to July 1st, 1918, were you in the natural gas
414 business, and if so, without being specially interrogated, will you give your respective positions in that business, or employment, in connection with the natural gas business?

A. I have been engaged in the natural gas business since 1886. For eight years previous to my connection with the Hope Natural Gas Company, I was general manager of the Manufacturers Light & Heat Company; for a period of about two or three years previous to my connection with the Manufacturers Light & Heat Company, I was the general manager and general superintendent of the Peoples Natural Gas Company in Pittsburgh; previous to that, I was connected with the Central Kentucky Natural Gas Company, constructed and lined a plant into the Cities of Lexington, Winchester and Mt. Sterling, Kentucky. Previous to that, I was engaged with various companies, and worked for the East Ohio Natural Gas Company, the Reserve Gas Company, the United Natural Gas Company, the Buffalo Natural Gas Fuel Company, and several other companies. I was engaged on construction work, building pipe lines and looking after fields, drilling of wells, laying of lines in the streets in various cities and towns, connecting up meters, and installing
415 regulators, and general construction, in connection with the installation of natural gas plants for distributing gas, and also in the drilling of wells and the connecting up of wells in the fields, and constructing main lines.

Q. Are you thoroughly familiar with every branch and department of the natural gas industry, including the wells, fields, the lines, and the production and supply of gas finally to the consumers?

A. I believe I am. I have been engaged in the business for about thirty-five years or better, and have worked in nearly every department in the business myself, and have also had charge of the construction and building of nearly all kinds of appliances used in connection with the natural gas business.

Q. When you speak of being general manager of the Manufacturers Light & Heat Company, that is the company of which Mr. H. A. Quay, the former witness, is now the manager?

A. It is.

Q. The same company?

A. The same company.

Q. You spoke of the Hope Natural Gas Company, of which you are now the vice president and general manager. That is the
416 Hope Company to which Mr. Quay referred as having a contract with, which has been offered in evidence?

A. It is.

Q. The Hope Natural Gas Company has gas territory in what states at the present time?

A. In the State of West Virginia.

Q. State the amount of gas territory now owned by the Hope Company, and the number of wells?

A. On December 31, 1919, the Hope Natural Gas Company held, under lease, in the State of West Virginia, 1,009,993.53 acres of land,

Q. How many?

A. 1,009,993.53 acres. This includes both the operated and unoperated acreage.

Q. How many wells?

A. On the same date, December 31, 1919, they had 3,440 gas wells—producing gas wells.

Q. Can you give us in round numbers the amount of that acreage that is considered as developed, that is, developed to the extent of being considered as gas productive, and the quantity undeveloped—not yet determined whether gas productive or not?

A. What is carried on the books of the company as operated acreage consists of parcels of land, upon which wells are actually
417 drilled. That is approximately 322,777 acres, but interspersed with that there would be a very considerable number of acres that would be considered as operated acreage.

Q. That is, productive, you mean?

A. Not productive, but it would be proven,—proven acreage rather than operated acreage. By that I mean that it lies in such close proximity to tracts of land upon which wells are drilled that it is practically proven territory, and I would say roughly that it would probably amount to two hundred or two hundred and fifty thousand acres—this territory.

Q. In addition to the——

A. In addition to what is classed as actual operated acreage. That would leave about from four to five hundred thousand acres of what might be called unproved acreage.

Q. How long has the Hope Natural Gas Company been engaged in obtaining and developing this gas territory?

A. About twenty-one or twenty-two years. I might add to that, ever since the organization of the company, which I believe was in 1898.

Q. What is the amount of the gas production of the Hope Natural Gas Company—Let us adopt the date of December 31, 1919, to which you referred—in round numbers?

418 A. During the year ending December 31, 1919, the Hope Natural Gas Company produced and sold from the—from its own territory, approximately 47,000,000,000 cubic feet of gas.

Q. 47,000,000,000?

A. Yes, sir.

Q. That is, to all of the companies with which it had contracts and to its own consumers?

A. That is the gas that it produced from its own territory. It does not include, however, the gas that it purchased from other companies and other producers.

Q. How much gas did it purchase, in addition to its production, to which you have referred?

A. During the year 1919, it purchased from other companies and other producers, approximately 20,000,000,000 cubic feet of gas.

Q. Now, the Hope Company is engaged in the business of supplying gas, is it not, directly to consumers, as well as to other gas companies?

A. It is.

Q. Will you give us, please, the consumers which the Hope Company has upon its own lines, and which it supplies, excepting for the moment other gas companies?

A. The Hope Natural Gas Company supplies gas to consumers directly from its own lines in the City of Parkersburg, West
419 Virginia, the City of Mannington, West Virginia, the City of Sistersville, West Virginia, the City of Paden City, West Virginia, Pine Grove, West Virginia, and a number of other smaller communities. Those are the principal cities which it supplies directly.

Q. In addition to that, the Hope Company supplies gas to certain gas companies; will you name those companies?

A. It supplies gas to the East Ohio Natural Gas Company, the Peoples Natural Gas Company, the Manufacturers Light & Heat Company, the Fayette County Gas Company, the West Virginia Light, Heat & Power Company, Clarksburg Light & Heat Company, and there may be one or two other smaller companies, I don't recollect.

Q. What is the total number of consumers on the lines of the Hope Company in the state of West Virginia, whom you supply directly from the lines of the Hope Company?

A. Approximately 18,000 consumers.

Q. Do you supply any other consumers directly from your own lines in any other state than West Virginia?

A. We do not.

Q. Have you a map showing the lines and territory of the Hope Natural Gas Company?

A. We have.

Q. Will you produce it, please?

A. Yes, sir.

Q. While we are waiting for that map, Mr. Sullivan, will
420 you be good enough to state the quantity of gas supplied by the Hope Company to consumers, both domestic and industrial, in the State of West Virginia, during the year 1919? And at the same time, give us the amount supplied to all others, outside of the State of West Virginia.

A. The Hope Natural Gas Company, during the year 1919, delivered to its own consumers directly in the State of West Virginia, approximately 6,300,000,000 cubic feet of gas.

Q. And outside?

A. To other consumers——

Q. I mean now, outside of the State of West Virginia—No, I don't mean that either; I mean to its other consumers.

A. To its other consumers it supplied approximately 61,000,000 cubic feet of gas, making its total sales about between sixty-seven and sixty-eight billion cubic feet of gas.

(Map previously requested, produced and marked as Pennsylvania Exhibit No. 15).

Q. Now, Mr. Sullivan, I show you map marked for identification Pennsylvania Exhibit No. 15, and ask you if this represents, according to the legend thereon, the main lines of the Hope Natural Gas Company, the Reserve Gas Company in West Virginia, and
421 the Peoples Natural Gas Company in Pennsylvania?

A. It does.

Q. As of December 31, 1917?

A. Yes, sir.

Q. Has there been any substantial change in these main lines since December 31, 1917?

A. There has been no change in the lines as shown on the map, but there has been some additions in the way of lines to wells, and some very considerable lines that have been built since that date that are not shown on the map.

Q. Those would not be known as main lines, would they—or would they?

A. Yes, they would, some of them.

Q. Well, then, as I understand you, there have been in addition to what—Well, I will put it the other way: The lines, as shown upon this map, are now in operation by these respective companies?

A. They are.

Q. And in addition thereto, certain additional lines have been laid since December 31, 1917, which are not shown upon this map?

A. That is correct.

Q. And which are now in use by these respective companies?

A. Yes, sir.

422 Q. Just digressing for a moment because of the legend upon this map, what is the Reserve Gas Company? We have not yet had it referred to.

A. The Reserve Gas Company is a company operating in the State of West Virginia, producing and transporting gas and selling it to consumers to some extent directly, and to other companies outside of the State of West Virginia—consumers in West Virginia directly and to other companies outside of the State of West Virginia.

Q. And who is the general manager of the Reserve Company?

A. Mr. John B. Corrin.

Q. Now, will you state generally what is the Peoples Natural Gas Company?

A. The Peoples Natural Gas Company is a company operating in the State of Pennsylvania, producing gas, transporting and supplying it to consumers in the State of Pennsylvania. It also purchases large quantities of gas from the Hope Natural Gas Company for distribution in the State of Pennsylvania.

Q. Does the Hope Natural Gas Company—calling your attention to this Pennsylvania Exhibit No. 15—extend much, if any, beyond the state line between Pennsylvania and West Virginia—I mean, with its lines?

A. It does not.

423 Q. And does the Reserve Company?

A. It does not, to the best of my knowledge.

Q. The general manager of the Peoples Natural Gas Company is Mr. John B. Tonkin, is he not?

A. Yes, sir.

Q. The lines as shown upon this map, Pennsylvania Exhibit No. 15, the pipe lines, do not indicate by color the respective ownership of the lines as between the Hope, the Reserve and the Peoples Companies, does it?

A. It does indicate by colors the lines owned by the Reserve Gas Company.

Q. And which are those?

A. Those are the lines marked on the map in blue. It does not distinguish by color the difference between the Hope Gas lines and the lines of the Peoples Natural Gas Company, the lines of the Peoples Natural Gas Company all being located in the State of Pennsylvania.

Q. Now, as a matter of fact, the Hope Natural Gas Company, the Reserve Gas Company and the Peoples Natural Gas Company are substantially controlled by the same interests, known as the Standard Oil interests, are they not?

A. The Hope Company and the Peoples Company are. The Reserve Company has a very large ownership.

Q. How much?

424 A. I believe about 49 per cent, according to the best information I have. The Standard interests own 51 per cent and the other interests own 49 per cent of the Reserve Gas Company.

Q. Does this map, Pennsylvania Exhibit No. 15, correctly represent, Mr. Sullivan, the respective lines of these companies?

A. It does, to the best of my knowledge and belief—that is, the main transmission lines. There has been no attempt to show either the distributing lines of the companies or the lines connecting wells.

Mr. Weil: I now offer in evidence Pennsylvania Exhibit No. 15. And I will say to counsel that we will have copies of this map made, which we will hand to them for their use.

Q. Mr. Sullivan, to refresh your recollection with reference to this map, Pennsylvania Exhibit No. 15, let me call your attention to what is known as the River Gas Company. Are not the lines of the River Gas Company also indicated upon this map, that is, a portion of them?

A. No, sir. The River Gas Company operates entirely within the State of Ohio, but there is a connection between the lines
425 of the Hope Company and the lines of the River Gas Company.

Q. Well, are the River lines shown upon this map in any way?

A. They are not. The connection between the lines of the Hope Company crossing the River at Marietta, Ohio, is shown, but that is all.

Q. To refresh your recollection as to part of your testimony a moment ago, when you mentioned the parties to whom the Hope Company sold gas, you did not mention the River Company, you stated there might be some that you had omitted?

A. I overlooked the River Company, that is one of the companies to which the Hope sells gas.

Q. Now, Mr. Sullivan, will you briefly, without taking up too much time, give us the sizes of the main lines of both the Hope Company and the Peoples Company? I am going to ask you about both, because you were formerly manager of the Peoples Company, and that will save time when we come to examine the representative of the Peoples. Just give us briefly—if you want the map you can refer to it—the main transportation lines, the sizes, and distances, both of the Hope and the Peoples Companies.

A. The pipe line system of the Hope Natural Gas Company is built in what we might call three divisions: the high-pressure
426 division, the medium high-pressure division and the suction lines. Starting in, in Gilmer County, West Virginia, at the point known as Cedarville, the medium high-pressure lines extend north to a point in Wetzel County known as Hastings Station, a distance of approximately 70 miles; starting from Hastings Station in Wetzel County, the lines branch, and a main high pressure line extends to the state line between Pennsylvania and West Virginia, in Greene County, Pennsylvania, to a point known as Brave Station, at which point it connects with the lines of the Peoples Natural Gas Company——

Q. Mr. Sullivan, as you go along, give us the diameter of these lines?

A. The lines differ at some points in diameter. The line I have just described, starting from Cedarville, starts out with a 14-inch line, then connects into a 16-inch line for a distance, then connects with a 20-inch line, which extends to Hastings Station. The lines leading from Hastings Station to Brave Station in Greene County, Pennsylvania, connecting with the Peoples Natural Gas Company's lines, are 10 inch—one 10-inch and one 16-inch line. Starting from Hastings Station, in Wetzel County, West Virginia, there are three lines going in a northwesterly direction to the Ohio River, to the state line between Ohio and West Virginia, at which point
427 they connect with the lines of the East Ohio Natural Gas Company. This connection is at a point just about a half a mile north of Clarington, in the State of Ohio, and the size of the lines are two 20-inch lines and one 18-inch line. Starting from the same point in Wetzel County, West Virginia—that is, Hastings Station—there are lines running in a northwesterly direction, which connect with the lines of the East Ohio Natural Gas Company at the Ohio River, at a point about three miles south of Moundsville, West Virginia. This is an 18-inch line, also a 10-inch line. There are various other lines through the State of West Virginia, varying in size from 8 inches up to 16 inches, which connect into these main feeders or lines. The lines of the Peoples Natural Gas Company, starting from Brave Station, in Greene County, Pennsylvania, and extending in a northeasterly direction to Pittsburgh, a distance of about 60 miles, are one 12-inch and one 20-inch line. In addition to these lines, there are other lines extending from Clarion County through the Counties of Armstrong and Allegheny, to Pittsburgh, a distance

of approximately 50 miles. This is part 8-inch line and part of it is 12-inch. Various branch lines leading from these main
428 lines in different directions; varying in size from 8 to 12 inches in diameter. That, in a general way, covers the lines of the Hope Company and the Peoples Company.

Q. At what point does the Hope Company cross the State line between West Virginia and either Ohio or Pennsylvania?

A. The lines of the Hope Company do not cross the state line, but connect with the lines of the other companies at the state lines.

Q. Well, as I understand, the Hope Company, for example, delivers gas at Brave—or what do you call it?

A. Brave Station.

Q. Brave Station; to the Peoples Natural Gas Company there, doesn't it?

A. Yes, sir.

Q. Well, now, don't the Hope Company's lines extend across the boundary line of West Virginia to that point?

A. I think it extends a very short distance across the state line.

Q. Yes, and delivers gas at Brave Station to the Peoples Natural Gas Company?

A. Yes, sir.

Q. Now, give us the other points in the same way—I don't care whether it extends across a foot or a mile, it is immaterial—I
429 just want the points at which it crosses the line and delivers gas to these other companies?

A. At Brave Station, in Greene County, Pennsylvania, and at a point almost in the extreme southwestern corner of Greene County.

Q. At what point?

A. It is just north of Littleton, in West Virginia.

Q. And where else?

A. Those are the only two points that it delivers gas to the Peoples Company.

Q. Well, now, to the other companies, give us those in the same way.

A. It delivers gas to the Fayette County Gas Company at a point known as Wade Station, in the eastern part of Monongalia County, West Virginia. There is no town or anything close there to indicate the exact point, but it is shown on the map. The Hope Company, in the same manner, delivers gas to the East Ohio Company at the Ohio River, at a point about three miles south of Moundsville, and at another point about half a mile north of Clarington, Ohio.

Q. Well, at this place south of Moundsville, that delivery is made in West Virginia; and that place near Clarington, the delivery is made, as I understand it, in Ohio?

A. The measurement is made in West Virginia, but my
430 information is that the Hope Company owns the lines that cross the river connecting with the East Ohio Lines on the Ohio side of the river; at the point north of Clarington, the measurement is made on the Ohio side of the river.

Q. Well, then, near Moundsville the Hope Company's lines cross into Ohio there?

A. That is my information.

Q. Now, what is the next point? Go ahead with some of the other companies.

A. The Hope Company delivers gas to the River Gas Company at a point in Pleasants County, West Virginia, almost directly opposite from Marietta, Ohio. In this instance, the Hope Company also owns the line leading into Ohio, across the river.

Q. Through which this gas passes?

A. Yes, sir. The Hope Company delivers gas at another point to the Peoples Natural Gas Company, from Brooke County, West Virginia; that is at a place, or at a point west of Burgettstown, in the State of Pennsylvania. I think that covers the different points.

Q. Does the Hope gas line at that point cross the state line into Pennsylvania or not?

A. I am unable to say definitely regarding that; I don't know.

431 Q. Going back again to the companies to which the Hope Company sells gas, let me refresh your recollection as to the Northwestern Ohio Gas Company supplying the towns of Toledo, Ohio, and other cities in Ohio, what have you to say about that?

A. The Hope Company sells gas to the Northwestern Ohio Natural Gas Company, supplying Toledo, Ohio, and that gas is transported through the lines of the Reserve Gas Company, and, in fact, is part of the production of the Reserve Gas Company.

Q. And where is that delivery made by the Hope Company?

A. That gas is delivered to The Connecting Gas Company, at the Ohio River, and is then transported through the lines of The Connecting Gas Company from the Ohio River to a point in Ohio known as Sugar Grove, Ohio, I think in—I forget the name of the county—in Fairfield County, at which point it is delivered to the lines of the Northwestern Ohio Natural Gas Company.

Q. Well, now, who owns the lines crossing the river through which this gas is transported, the Reserve or the Hope Company—I mean, between West Virginia and Ohio.

A. The lines crossing the river are owned either by the Reserve Company or the Connecting Gas Company; now I am unable to say which.

432 Q. Can you give us the number of miles of pipe of the Hope Company in the State of West Virginia?

A. Approximately 3,550 miles, in sizes of two inches and above.

Q. As I understand, these maps do not purport to give anything except the general lines? They don't enter at all into the gathering lines, or the small lines supplying any of the towns or cities?

A. They do not—merely the transmission lines in sizes of eight inches and above; and no attempt has been made to show on the map smaller lines through the fields or the distributing lines to the various plants, the town plants.

Q. Do I understand, this only shows the transmission lines, you say, eight inches or above?

A. There may be a very few lines shown on there of a smaller size than eight inches, but only comparatively few.

Q. Is that true also of the Peoples Company lines, as shown upon the map?

A. Yes, to the best of my knowledge. I have not examined the sizes of all the lines shown, but my understanding is that the map is only to show the larger lines.

Q. Turning again to the map, Pennsylvania Exhibit No. 15, will you give us, Mr. Sullivan, the location of the compressor
433 stations upon your lines, the lines of the Hope Company; and state their capacity as you go along, without being specially interrogated.

A. Do you want all of them?

Q. Yes, all of them.

A. The largest station, compressing station, is located in Wetzel County, West Virginia, at a point known as Hastings. This station delivers gas to the East Ohio Natural Gas Company and the Peoples Natural Gas Company, and consists of four large gas engines, with a combined horse power of about 5,000; also, nine steam engines, with a combined horse power of approximately 12,150. There is another station located at a point in Monongalia County, West Virginia, about five miles south of *of* Brave Station, known as Lemley's Station. This station also delivers gas to the Peoples Natural Gas Company, and has a horse power of approximately 250.

Another station located in Marion County, at a point near Mannington, West Virginia, which delivers gas to the Peoples Natural Gas Company and to the Manufacturers Light & Heat Company. I am unable to give the horse power in this station from memory. Hawkins Station, located in Marion County, West Virginia, at a point south of Fairview, which delivers gas to the Fayette County Gas Company; I am unable to give the horse power
434 from memory. The Bridgeport station, located in Harrison County, West Virginia, at a point northeast of Clarksburg, delivering gas into the lines leading into Wright Station. Peora Station, located at a point in Harrison County, West Virginia, slightly northwest from Lumberport. Schutte Station, located in Doddridge County, West Virginia, at a point northeast of West Union, delivering gas to the lines leading to Hastings Station. Fink Station, located in the northern part of Gilmer County, West Virginia, also delivering gas to lines leading to Hastings Station. Schultz Station, located in Pleasants County, West Virginia, delivering gas to lines leading to Parkersburg, West Virginia, and Marietta, Ohio. Craig Station, located in Ritchie County, West Virginia, at a point east of Macfarlan, delivering gas to the lines leading to Parkersburg, West Virginia, and Marietta, Ohio. The Big Spring Station, located in the northern part of Calhoun County, West Virginia, delivering gas into the same lines as Craig Station and Schultz station. Centerville Station, located in Tyler County, West Virginia, southeast of Sistersville, delivering gas to the lines of the Manufacturers Light and Heat Company. Deep Valley Station, located in the western part of Doddridge County, West Virginia, de-
435 livering gas to lines leading to Hastings Station. Ice Station, located in the eastern part of Wetzel County, West Virginia,

delivering gas to lines leading to Hastings Station, and also the lines connecting to the lines of the Peoples Natural Gas Company. Hawkins Station, located in Marion County, West Virginia, northeast of Mannington, delivering gas to the lines of the Fayette County Gas Company, in Pennsylvania. Sardis Station, located in Harrison County, West Virginia, delivering gas into the lines leading to Wright's Station. Marts Station, located in Doddridge County, West Virginia, delivering gas into the lines leading to Hastings Station. Milford Station, located in Harrison County, West Virginia, at a point near West Milford, delivering gas into the lines leading to Hastings Station. Lightburn Station, located near the county line between Harrison and Lewis Counties, West Virginia, delivering gas into the lines leading to Hastings Station. Hoover Station, located in the northern part of Braxton County, West Virginia, near Burnsville, delivering gas to the lines leading to Hastings Station, and also to the lines of the West Virginia Light, Heat & Power Company, to whom the Hope Company sells gas.

436 There are at the present time about thirty-seven, as I recollect, of these stations, and I may have missed some of them in going over the map. I am unable to give the horse power of all the different stations, but the total horse power is approximately 60,000.

Q. Now, in addition to these compressor stations, to which I have called your attention, of course the Hope Company has its measuring stations, so called, or meter stations, at various points upon its lines, both where it receives gas by purchase and where it sells gas to other parties?

A. It does.

Q. And has a large number of such stations?

A. It has.

Q. Now, we have had considerable testimony in the case heretofore and today about compressor stations. Will you just briefly state what a compressor station is?

A. A compressor station is a collection of machinery that is installed for the purpose of taking gas from the wells after the natural rock pressure gets so low that it will no longer force it through the lines to a market. The compressing stations are installed at various points through the different fields, and the lines leading from these compressing stations are connected to the wells. The operation of these stations has the effect of reducing the pressure in the lines low enough,—lower than the well pressure, so that the natural pressure.

437 whatever the well may produce, will enable the gas to feed into those lines. Now, in many instances, these compressing stations reduce the gas to a point below atmospheric pressure.

Q. You man, reduce the pressure of the gas?

A. Reduce the pressure below atmospheric pressure, so that the wells have an opportunity of discharging the gas into those lines, and the compressing stations compress the gas and raise it to a pressure sufficient to cause it to flow through the transmission lines to a market. What this pressure may be depends very largely on the size of the lines leading from the stations and the distances which the gas

has to travel, but the station has the effect of permitting the flow of all of the gas in the sand to the markets, by reason of reducing the pressure between the station and the wells, and then increasing it sufficiently at the station to cause it to flow through the lines to the markets.

Q. In other words then, the compressor station has a dual effect: The first effect, what we will call back of the compressor station, and the other effect, what we may call in front of the compressor station?

A. Usually, in speaking of that, we term the lines from the station to the wells the suction lines, and the lines from the stations to the markets the discharge lines.

438 Q. Very well then, using the nomenclature of the trade, the effect is to reduce the pressure in the suction lines, so as to enable the gas from the oil sands to pass up to the gas sands, and pass up to a point where the compressor station will affect that gas, and then compress it in the compressing cylinders, so that when it is discharged into the transmission lines, it has an initial pressure of the amount to which it has been compressed by the compressors, so as to pass through those transmission lines to some other point distant therefrom?

A. That is correct. That is the effect the operation of the station has on the gas.

At this point a recess was taken until 1:30 P. M.

439 Wednesday Afternoon.

And now the hour of 1:30 o'clock, P. M., having arrived, hearing resumed, pursuant to adjournment.

T. O. SULLIVAN resumes the stand.

Direct examination (continued).

By Mr. Weil:

Q. Mr. Sullivan, have you available the figures, and are you able to give us the amount of gas delivered by the Hope Company to the respective Companies which you said in your testimony you were supplying with gas during the year 1919?

A. I think I can; I will see—I have that information and can furnish it.

Q. Did the Hope Company supply these same companies in 1918, the year previous, and are they likewise supplying them now?

A. They did supply them in 1918, and are supplying them now.

Q. Now, then, taking them up in such order as you may desire—When you give us the amount of gas supplied in 1919, I presume you refer to the calendar year?

440 A. I do.

Q. Also state at the same time the larger cities that these companies supply with gas, so as to have it all in the one answer.

A. During the year ending December 31, 1919, the Hope Natural Gas Company delivered to the East Ohio Gas Company 32,349,750,000 cubic feet of gas. The East Ohio Gas Company supplies gas to the city of Cleveland, Ohio; the City of Canton, Ohio; Akron, Ohio; Massillon, Ohio; New Philadelphia, Ohio; Youngstown, Ohio, and several smaller communities.

During the same year, ending December 31, 1919, the Hope Natural Gas Company delivered to the Peoples Natural Gas Company 6,496,994,000 cubic feet of gas. The Peoples Natural Gas Company supply gas to the City of Pittsburgh, Pennsylvania; to Wilkinsburg, Pennsylvania; Turtle Creek, Pennsylvania; Jeannette, Pennsylvania; Greensburg, Pennsylvania; Latrobe, Pennsylvania; New Kensington, Pennsylvania; Derry, Pennsylvania; Johnstown, Pennsylvania—through another company, another distributing company; Altoona, Pennsylvania; and a number of smaller communities.

During the year 1919, ending December 31st, the Hope Natural Gas Company supplied to the River Gas Company 1,220,
441 815,000 cubic feet of gas. The River Gas Company supplies gas to the City of Marietta, Ohio, and several other smaller places in the vicinity of Marietta, Ohio.

During the same year, 1919, ending December 31st, the Hope Natural Gas Company supplied gas to the Manufacturers Light and Heat Company, 12,268,302,000 cubic feet of gas. The Manufacturers Light and Heat Company supplies gas to the City of Pittsburgh, Pennsylvania; Carrick, Pennsylvania; Sewickley, Pennsylvania; Rochester, Pennsylvania; Beaver Falls, Pennsylvania; New Castle, Pennsylvania; East Liverpool, Ohio; Steubenville, Ohio; Toronto, Ohio; Wellsville, Ohio; New Martinsville, West Virginia; Wellsburg, West Virginia; New Cumberland, West Virginia; Moundsville, West Virginia; Benwood, West Virginia; and numerous other smaller communities in all three states.

During the year 1919, ending December 31st, the Hope Natural Gas Company supplied gas to the Fayette County Gas Company, amounting to 1,597,130,000 cubic feet. The Fayette County Gas Company furnishes gas to the City of Connellsville, Pennsylvania; Uniontown, Pennsylvania; and some other smaller towns in Pennsylvania.

442 During the same year, the Hope Natural Gas Company furnished gas to the Northwestern Ohio Natural Gas Company, through the lines of the Reserve Company and the Connecting Gas Company, amounting to 5,709,498,000 cubic feet.

This is practically the gas supplied to companies other than those connected direct to the lines of the Hope Company in the State of West Virginia; the gas supplied in the State of West Virginia is included in the amount of gas furnished by the Hope Company itself.

Q. And what cities does the Northwestern supply?

A. Northwestern Ohio Natural Gas Company supplies gas to the City of Toledo, Ohio, and a number of smaller communities surrounding Toledo.

Q. Now, do you recall any other companies?

A. We sold a small quantity of gas during the year 1919 to the Reserve Gas Company, amounting to 13,266,000 cubic feet of gas.

Q. And what communities does it supply?

A. It supplies a scattered number of consumers through the State of West Virginia, and sells its gas to the Union Natural Gas Company at Canton, Ohio.

Q. And what does the Union Natural Gas Company supply?

A. They supply a number of towns in Ohio and Indiana.

443 Q. Do you know whether the Union Gas Company also supplies communities in Indiana?

A. I am informed that they do; I have mentioned Indiana.

Q. Give us now the characteristics of natural gas, how it is found, where it is found, and what you know from your experience about how its presence is determined in any locality or in any field.

A. Natural gas can be best described as a mineral, and is found—has been found in different localities in a number of states in the United States. In many instances, geologists have been employed to examine the different sections of the country, where somebody conceived the idea that there was a possibility that natural gas might exist. In some instances where the reports of the geologists were favorable, drilling has been done, and natural gas was sometimes found, and sometimes it was not found. In many other instances, when geologists reported unfavorably upon a territory, drilling was done also, and sometimes natural gas was found there and sometimes it was not found there. About the only way that I know of to determine with any degree of certainty whether there is natural gas under any portion of the earth's surface, is by drilling for it, and drilling to the sands where it is expected to be encountered.

444 Have I covered all of *of* your question or not?

Q. I think you have very fairly. Now, then, after gas has been found by the drill in any particular locality, what is the fact as to its pervading that whole locality, and as to dry holes being drilled in vicinity to, or juxtaposition to wells that have been put down in which gas was found?

A. Where natural gas has been found in any considerable quantities in a certain territory, it is usually considered a favorable indication that gas may exist within reasonable distances at least from where the first wells have been drilled, but it very frequently occurs that dry holes are drilled even in close proximity to producing gas wells. So the fact that gas has been found in any particular well or field cannot be considered as a sure indication that other wells drilled in the same field will be productive of gas.

Q. How many gas-bearing sands are you familiar with from your own operations and observations, and give us, in the different localities, the respective depths that these sands exist from the surface.

A. In this section of the country, taking in the states of Pennsylvania, West Virginia, and some portions of Ohio, there are five or six different sands that have been productive of gas. Now, the distance——

445 Q. Now, just a moment before you reach the distance. Give us the common name by which those sands are known to the trade.

A. There is the Salt Sand, the Injun Sand, the Third Sand, the Fourth Sand, the Fifth Sand, the Gordon Sand, the Gordon Stray Sand, the Sixth Sand, the Bayard Sand, the Elizabeth and the Speechley. Now, all of those sands do not exist all over the territory in this section of the country, some existing in one territory and some in another, but generally speaking in most of this territory there are four or five sands where gas may be expected to be encountered in either one or the other of the sands, and sometimes in two or three of them, in the same well. Now, the distances at which those sands are located from the surface is something that it is impossible to determine, for the reason that the surface varies so much in elevation, and that is usually figured from some fixed strata in the earth's surface that does not change. In this section it is usually figured from the Pittsburgh coal.

Q. That is, it is figured so many feet below the Pittsburgh coal?

A. So many feet below the Pittsburgh coal. The Injun sand is at a depth of about 1,360 feet below the Pittsburgh coal; the
446 Gordon sand, as I recollect it, runs about 2,200 or 2,300 feet below the Pittsburgh coal; and the Speechley sand about thirty-one—thirty-three—thirty-one or thirty-two hundred feet below the Pittsburgh coal. Those distances all vary, as the sands may be dipping in one direction or another, usually towards the southwest in this section.

Q. And what are the various distances of the Pittsburgh coal from the surface?

A. That all depends. If you are on top of a hill, it is deeper than if you are down in a valley; it all depends on where you are.

Q. Now, what is the depth of some of the deepest wells in which gas has been found in the section you have described?

A. Well, the deepest well that I know anything about, where gas has been found, is a well drilled about 50 miles from Pittsburgh, along the Lincoln Highway, in which gas has been found. That well is somewhere about 60—well, between 6,500 and 7,000 feet, I don't remember the exact depth, but some gas has been encountered at that depth. But usually in this district the deeper wells run from 3,000 to 3,500 feet from the surface, depending on the location. Now, when I speak of "this district," I am speaking of southwestern Pennsylvania and northwestern—the northern part of West Virginia.

447 Q. Have you any information as to what that deep well cost to drill?

A. I have not any definite information regarding it, but I have understood in a general way that it will run between fifty and seventy-five thousand dollars. It may be considerably more than that before it is really in producing condition, for the reason they are having some trouble with the well now. It is impossible to tell what it will cost by the time it is eventually completed.

Q. At the present time, what would you say was a fair average of the cost of wells in the section that you have described?

A. To drill and complete wells through the section that I have been talking about, at the present time, will cost from fifteen to eighteen thousand dollars per well.

Q. Does that include the casing and tubing and equipping?
A. Yes.
Q. Ready for production?
A. Yes, sir.
Q. When a well is drilled, what is the process followed by the trade in preparing it for producing?
A. After it is drilled?
Q. What?
448 A. After it is drilled or before?
Q. After the well is drilled and the gas sand has been encountered and the gas found?
A. The first thing is to shut the well in either by closing it in in the casing or by inserting a string of tubing and a packer and shutting it in the tubing. After this is done, a market must be secured, and if there is no ready market——
Q. No, I am not speaking of a market now so much as I am the treatment of the well itself.
A. Well, after it is drilled——
Q. You spoke of the casing; when is the casing put into the well?
A. The casing is put into the well during the drilling; I spoke of it as shutting the well in the casing.
Q. What is the casing? Describe what the casing is.
A. The casing is a string of pipe usually about 6⅝ inches in diameter, which is inserted in the hole to shut off any cavings or water that may be encountered, until you get to a depth below where they are, so as to permit you to finish the drilling of the well into the gas sand.
Q. And this casing varies in depth from the surface to what depth?
A. Well, that particular string of casing varies in propor-
449 tion to the depth of the hole, wherever the gas may be encountered. If gas is found in the deeper sands, then a string of casing probably from twenty-two to twenty-six or twenty-seven hundred feet in length is inserted in the hole, to shut off the cavings or water that may have been encountered in the upper part of the hole. Of course, where a well is not drilled so deep, the string of casing is shorter, but there are two or three strings of casing or pipe put into wells in drilling them, always.
Q. Well now, just explain that a little more fully, where you say two or three strings of casing are inserted in the well. The first string put in is what is usually called drive pipe?
A. It is.
Q. And what size is that, usually?
A. Why, if you want to get at that, perhaps I had better describe the drilling of a well from the beginning.
Q. Very well, do that.
A. In the first place, after the rig is erected——
Q. You mean by the "rig"——
A. The derrick.
Q. The derrick that is constructed on the surface?
A. Yes, sir—the hole is punched in the ground to a depth of pos-

sibly 20 to 40 feet, and a conductor—what we call a wooden
450 conductor, is inserted in this hole. That is for the purpose of shutting out the surface water and any loose dirt that might be caving in or interfering with the starting of the drilling of the well.

Q. And about what size is this?

A. It usually is about 13 inches in diameter. After this is inserted, they commence drilling a hole—drilling a well—and drill a hole about 12 inches in diameter, into which is inserted a string of 10-inch drive pipe.

Q. And what about depth——

A. This is usually put in to a depth of about 400 feet above the Pittsburgh coal, provided the well is located in some section where the coal is deep. It is inserted, in any event, at a point to shut off the first water that may be encountered. After that casing is inserted in the well, then a string of 8¼ drive pipe—usually termed drive pipe, it is practically the same as casing—is inserted, and that extends through the Pittsburgh coal and shuts off the next water which may be encountered. After the 8¼ pipe is inserted in the well, drilling is continued until the Injun sand is drilled through or into. If no gas is found in this sand, a string of 6⅝ casing is inserted in the well, to case off all of the cavings above that sand. And then drilling is continued. If gas is found in some of the deeper sands, it is customary usually to put in a string of five and
451 three-sixteenths casing to the top of the Gordon sand, or to the lowest point at which any water or caving is encountered in the hole.

Q. About what would you say is the average depth there?

A. Oh, that runs anywheres from two to three thousand feet in depth, depending on the locality.

Q. Well, go ahead. What after that?

A. After the 5 3/16 is inserted, the well can be drilled into the gas producing sands, providing gas is found in any of the known sands common in this district. Of course, in drilling a deep well like the first well I mentioned, that procedure is changed somewhat, and the casing is put down to much deeper depths than the ordinary wells.

Q. Well, now then, after your well is completed, you spoke of putting in a string of tubing.

A. Yes, sir.

Q. What do you mean by that?

A. That is a string of pipe that is put into the well with a packer on the bottom of it, to shut off all water and caving that might be in the well at any point above the gas-bearing sand. That packer is usually placed right on top of the gas-bearing sand, and then the gas comes up through the tubing and is taken from the well
452 through the tubing.

Q. And what is the size of the tubing?

A. It varies, depending on the size of the well, anywheres from two to four inches in diameter—and also depending somewhat on the different sizes of casing that you have in the well. You have to put

in a string of tubing that will go inside of the smallest string of casing that has been used.

Q. Well, now, the packer that you have mentioned, what is that?

A. A packer is a contrivance that is made of iron, with a band of rubber fitted in between the two sections of iron, and this rubber is usually from—oh, from about an inch in thickness—and is placed down in the well just at the top of the gas-bearing sand, and the weight of the tubing—the contrivance is secured onto the bottom of the tubing, and the weight of the tubing is allowed to rest on that rubber, so that when the weight comes down it presses the rubber out against the walls of the well, so as to shut off and prevent the gas from going up outside of the tubing, but pulls it so it will go to the surface on the inside of the tubing.

Q. You have below that packer what is termed in the trade—a device known as the anchor, have you not?

453 A. Sometimes. That depends on the kind of packer you use, whether it is an anchor packer or a wall packer.

Q. Well, now, after you get it cased and tubed, as you have described, what do you do then?

A. That all depends on the conditions. If you have use for the gas, it is connected up to the line leading from the well and turned into the main line, and the gas taken to market. If you don't have a market for it, and no use for it, it is usually shut in and allowed to remain in the well as long as it will stay there.

Q. How do you shut this in?

A. By the closing of the gate at the top of the well and anchoring it down,—If the pressure on the well is enough, so that there will be no danger of its blowing the tubing out of it.

Q. What is this gate?

A. The gate is a valve made to open or close, so as to pull back the flow of gas or to permit it to flow through the valve when it is opened.

Q. What forces the gas from the gas-bearing sands up to the surface?

A. The pressure which may be back of the gas,—that might be water pressure, or possibly oil pressure, or some other—It might be something else, but it is the pressure back of the gas that

454 forces it to the surface.

Q. What are the variations in pressure of the gas in the wells?

A. Oh, that varies greatly in different localities and in different sands. There are some wells of very few pounds and in other wells it runs up into thousands, or more than a thousand pounds.

Q. Now, as the pressure,—what is called the rock pressure?

A. The rock pressure is the pressure which will accumulate in the well when the gate or valve at the top of the well is closed, and no gas being taken out of the well. In other words, it means the pressure at which the gas is confined in the rock.

Q. Now, as the gas is taken out from the well for utilization, what is the fact as to the rock pressure gradually declining?

A. Just as soon as the gas commences to be taken away from the well, the pressure commences to decline.

Q. And I suppose that varies in accordance with the quantity taken out?

A. It does.

Q. And also varies, does it not, with the porosity of the sand in which the gas is confined?

A. I don't know that the porosity of the rock would affect
455 the rock pressure at all.

Q. I was speaking though of the rapidity with which it declined. Doesn't that depend——

A. I think the rapidity with which it declines depends almost entirely upon the rapidity with which the gas is taken away from the well, taken out of the sands. Of course, where the rock is open and porous, the volume of gas taken out in a given time is usually larger than it is where the rock is close and hard.

Q. Well, what is the fact as to the rock pressure alone being any standard by which can be determined the quantity of gas that can be obtained from a given well?

A. The rock pressure does not indicate anything in regard to the volume. It frequently occurs that a well with a very high rock pressure may have a very small volume of gas, and produce but very little gas; whereas, on the other hand, a well with an open, porous sand would have—would not have so much rock pressure, but would produce more gas in a given time—a larger volume, very much larger.

Q. What has been your observation from your long and wide experience, as to the effect upon the exhaustion of gas in a given territory by other wells being drilled in the same locality or section?

A. The greater the number of wells drilled in any par-
456 ticular field, if the gas is utilized, the more rapid will be the decline of the field.

Q. And what has been the effect of drilling of oil wells in gas sections?

A. That has also had the effect of injuring a good many gas wells, by reason of the fact that when the oil wells are drilled, the gas is allowed to escape, thereby depleting the amount of gas in the field; and in some instances oil flows in and drowns the gas out.

Q. And what about water having that effect?

A. Water,—also the same thing occurs with water, very frequently, more especially as the pressure in the field declines; as the pressure gets lower, the water comes in on the field and drowns out the gas or forces it to some other location or point.

Q. In consequence of those facts, what has been the experience of the trade as to the necessity of finding a market for and using the gas when once found in the sand, in order to avoid this depletion or exhaustion by others operating in the same territory?

A. It has been considered necessary in all fields where there was any number of people operating, to obtain a market for the gas as early as possible, for the reason that the gas would be taken out by others and cannot be conserved and held in the ground
457 under conditions of that kind.

Q. Has any device ever been discovered by the trade whereby, when the gas has been found and permitted to come to the

surface, it can be stored or kept on hand for ultimate use or consumption?

A. Only in limited quantities. Gas holders, in some few instances, have been built for this purpose, but a holder cannot be built that will hold a sufficient quantity of gas to make it of any very great benefit to the trade. A holder that would hold ten million cubic feet of gas would be a very large holder—an unusually large holder, in fact. And with the demand that there has been for natural gas, and the quantities that have been supplied by the different companies to their customers, 10,000,000 feet of storage would be of very little benefit.

Q. On most large gas lines, it would only operate, would it not, as the capacity for a very few hours?

A. That is all, a short time.

Q. On account of these characteristics which you have described, what has been the practice of the operating gas companies as to protecting themselves as far as possible by obtaining around their wells or fields large acreage, to prevent others from tapping the same sands?

458 A. It has been the custom with all of the larger companies to secure a sufficiently large body of territory to protect them from encroachments by other companies, in so far as they were able to do so, but it has not been possible to do that, only in some instances; in others, the territory has been taken up and leased by the different companies, in many instances about the same time,—there was a scramble to see who could get the leases. In some instances, a certain amount of territory was taken up and held for a time as being prospective territory, and in this class of territory there is not so much of an effort made to secure it all in a block as there is where it is considered producing territory. When this prospective territory is taken up, in many instances, where it is a little difficult to secure leases—possibly some of them are mixed up with numerous heirs, or other little legal technicalities, the companies have not bothered to clear those out of the way, leaving therefore a certain amount of open territory. Therefore, if that happens to be productive territory, the others are after it just about as soon as there are any indications that it is productive territory, to get their share of it if they can.

Q. Now, at one time in the history of the trade, before the introduction of compressor stations, this gas was conducted through

459 the transmission lines to market by the pressure with which the gas itself flows from the wells into the respective lines?

A. Yes, sir.

Q. About how long has it been since the installation of compressor stations became common with the trade?

A. The first compressing stations were installed—oh, possibly thirty years ago. Those were rather small stations, and were installed in fields where the gas had commenced to decline. In this section of the country the installation of compressor stations started in generally, you might say, about between fifteen and twenty years ago.

Q. Has there been much development in the improvement and

efficacy of these compressor stations since their installation became general?

A. There has been a very marked improvement. The first compressing stations that were installed were, of course, experimental, and very little was known about them, but as time went along, improvements were made, until at the present time the compressing stations are very efficient and, in fact, it is practically impossible to conduct the business without them.

Q. What are the classes into which the consumers of gas are divided, as generally known to the trade?

460 A. The two principal classes are domestic and industrial. Numerous companies carry accounts on their books, such as Miscellaneous and Churches and Public Schools, and different kinds of consumption, in different terms.

Q. And for what is the gas used?

A. For domestic use, the gas is used for cooking, lighting, and heating the homes of the people. Industrial gas is used in factories and mills, for manufacturing purposes and power purposes.

Q. The two uses then are for fuel purposes and for lighting purposes?

A. Fuel and lighting are the two uses; and for the production of power in gas engines.

Q. How far is the gas at the present time from the West Virginia fields being transported for consumption—the longest distances—Just a rough estimate.

A. Oh, roughly, I would say about 200 miles.

Q. What would be the distance, for example, from the West Virginia fields to the City of Toledo?

A. Well, that would be considerably more than 200 miles. I judge that would be—Well, to the best of my recollection, that would run about 225 or 230 miles. Now, I am speaking of the pipe lines, the distance by pipe lines, when I say that; the distance by

461 direct line might not be so far.

Q. Well, I mean the distance by pipe line. What would be the distance, for example, to Muncie, Indiana?

A. Well, I couldn't give that. I suppose——

Q. That would be still farther?

A. That would be still farther, in my opinion; I couldn't give that.

Q. And on the way east, how far would it be, for example, to Altoona from the West Virginia fields, by pipe lines, through which the gas is transported?

A. Well, I think about two hundred miles.

Q. Now, returning to the installation of these compressor stations, could the gas have been transported from the points of production in West Virginia, for example, to places like Muncie or Toledo or Altoona, or the other points of consumption—distant points of consumption in Ohio, Pennsylvania and Indiana—without the installation of these compressing stations?

A. It could not in any large quantities.

Q. And state whether or not these compressing stations were in-

stalled and the lines built, with reference to their size, for the purpose of transporting this gas in that way to the more distant points of consumption.

Mr. Hoffheimer: That is objected to, as calling for an opinion or conclusion of the witness; and as incompetent, irrelevant and
462 immaterial.

The Commissioner: Note the objection; the witness may answer.

A. Every natural gas plant is designed and built for some specific purpose, with a view to taking gas from some certain field, transporting it and delivering it to some certain market; and the installation of the compressing stations, the size of the lines, the size of the compressing stations, their location,—all of those things are carefully studied out and planned before the plant is built. The compressing stations are installed where it may be considered is the most favorable location to take the gas from certain territory,—or from wells located in certain territory, and deliver it into the lines leading to the markets. This is all definitely planned and fixed with most every gas company when the project of installing it is being considered and thought out. It is built for a certain specific purpose. Of course, later on, depending on conditions, additions and changes may be made from the original plan, but it is originally planned for a certain definite purpose.

Mr. Weil:

Q. Were the compressing stations, then, of the Hope Company and the lines of the Hope Company built with reference to this supply of gas to cities and towns in Ohio and Pennsylvania?

463 Mr. Hoffheimer: Same objection.

The Commissioner: Let the objection be noted, and the answer taken.

A. It is my understanding that the lines and compressing stations, and the general plan of the pipe line system of the Hope Natural Gas Company was laid out and installed with the definite purpose in view of supplying gas to towns in Ohio and, later on, to towns in Pennsylvania.

Mr. Hoffheimer: I move to strike out the answer, on the grounds stated in the objection; and also on the ground that the answer of the witness is hearsay.

Mr. Weil:

Q. In the operation of your lines in West Virginia, state whether or not it is the fact that, through your connection with the River Company and other companies which obtain production in Ohio and also in West Virginia, and other companies similarly situated and which supply cities or towns in Ohio and other States, at times the gas from those other lines, depending upon the pressure upon the

lines, goes back into West Virginia through the lines of the
464 Hope Company, and at times goes to consumers in West Virginia.

Mr. Hoffheimer: Objected to, first, because the question is vague; secondly, because it calls for an opinion or conclusion of the witness; thirdly, because no facts have been stated upon which such an opinion or conclusion could be based; fourthly, because the answer called for is speculative; and, fifthly, because the testimony is incompetent, irrelevant and immaterial.

The Commissioner: Note the objection, and let the witness answer.

A. Yes, sir, it is true that gas at times goes from the lines of the River Gas Company back into the State of West Virginia, through the lines of the Hope Natural Gas Company. I know this because there is a meter on the lines, and we pay the River Gas Company for the gas that goes through.

Mr. Weil:

Q. Now, Mr. Sullivan, prior to 1880, natural gas was produced, was it not, as merely incidental to the production of oil—or about that time?

A. Yes, prior to about that time, it was—at or prior to that time.

Q. And since the development of the natural gas business,
465 what is the fact as to sections of Pennsylvania and Ohio, and other States, being substantially wholly dependent upon natural gas for light and fuel in their homes?

Mr. Hoffheimer: Objected to, as calling for an opinion or conclusion of the witness, and not for any specific facts; and as incompetent, irrelevant and immaterial.

A. It is a fact that there are many communities in the States of Ohio and Pennsylvania, and other States, that are dependent upon the supply of natural gas for fuel and light.

Mr. Weil:

Q. What is the fact as to these appliances in those localities being specially adapted to the burning of natural gas, and not adapted to other fuel?

A. That is the case very largely where natural gas is used, that the appliances are specifically adapted to the use of natural gas, and they are not adapted to the use of other fuel, unless it was another gas. In some instances, coal appliances have been converted so as to use gas in them; those, of course, could be converted back to coal appliances easier than appliances which were especially con-
466 structed for the use of natural gas.

Q. And what is your knowledge as to the fact of houses having been constructed solely with reference to the burning of natural gas and not adapted—without reconstruction—to the use of other fuel?

A. There are many houses in the different localities where natural gas has been in use which are not adapted, not constructed so as to permit the use of coal, or other fuel or similar character, without a very considerable amount of reconstruction.

Q. Can you give us the amount of the investment made by the Hope Natural Gas Company in the State of West Virginia in acquiring lands, drilling wells, laying pipe lines, paying rentals and royalties, installing pumping and compressing stations, and other necessary incidents and appliances to its present natural gas business—giving this to us in round numbers, from the beginning to the present time?

A. I can only give you that approximately.

Q. That is all I want.

A. I can't give that very accurately, because it takes in a very wide scope, but I would say, roughly, that it exceeds a hundred million dollars, and might exceed that by a very considerable figure.

Q. You are satisfied that it would amount at least to that amount?

A. I feel satisfied it would be more than that; but anything
467 I say about that is based more on the expenditures and investment for the last ten years than previous to that time, when I am not familiar with the money spent by the company. I am satisfied it would exceed a hundred million dollars, and might exceed it very considerably.

Q. What is your present investment—that of the Hope Company—in the State of West Virginia, in wells, acreage, pipe lines, compressor stations and all other paraphernalia and appliances connected with the business?

A. Our investments are approximately $37,500,000 invested in West Virginia, excluding such items as materials and merchandise on hand, cash in bank, accounts receivable, and so forth.

Q. You mean by that, then, in actual plant?

A. Yes, that is the actual investment in plants. Your former question, as I understood, had reference to money spent in West Virginia—that included money spent for expenses and all other items of that character.

Q. Oh, yes.

A. Now, this is investment strictly, and takes in such items as gas wells, compressing stations, pipe lines, distributing plants, telephone and telegraph lines—tangible assets invested.

Q. Does this include the stocks in other companies——

A. It does not.

Q. —owned by the company?

A. It does not. Neither does it include any valuation on
468 the leaseholds other than the cost of obtaining them, the first payment, which is always charged against the leaseholds.

Q. Now then, in order to understand this a little more definitely: You gave us the item of thirty-seven million—what was it?

A. About five hundred thousand, I think.

Q. $37,500,000. Now, as I understand, this does not include, according to your statement—to your testimony—the stocks of other

companies operating in West Virginia which are owned by the Hope Company?

A. It does not include securities owned in other companies?

Q. Does this amount of $37,500,000 include any valuation upon the gas leaseholds held by the Hope Company, except the amount of bonus they may have paid therefor, or the rentals paid thereon?

A. It does not include any rentals. Neither does it include any valuation on the gas deposits, but it does include the bonuses paid for the leaseholds at the time they were acquired; rentals are not investment.

Q. Then, in this figure which you have given us, there is no valuation there upon the leaseholds as gas-holding territory?

A. Nothing other than as I have stated.

Q. Does this include the cost of drilling the gas wells that the company owns?

469 A. It does not include the cost of the labor in drilling; it does include the tangible material in the wells, such as pipe, casing, and so forth.

Q. Does it include the cost of the rigs upon these wells—the derricks?

A. It is my understanding that it does not, although I am not positive on that item.

Q. Does it include the cost of laying field lines or gathering lines for the system?

A. I am unable to answer that question just now; I can ascertain that.

Q. Will you ascertain that and let us know later on, if necessary? And will you ascertain before our next meeting the investment in the stocks of other companies?

A. You just want the amount?

Q. Yes.

A. Yes, sir.

Q. Also the cost of drilling the wells which the company now owns—just the cost of drilling—I am talking now about the labor cost.

A. The cost of drilling all the wells the company owns?

Q. Yes, at the present time. You can get that approximately. Also the cost of building the rigs in those wells, if the rigs are not included—you said you would find out.

470 A. Do I understand that you want the total cost of all the rigs that have been built?

Q. No, the rigs on the wells now owned. You said, I think three or four thousand wells, I have forgotten the number.

A. They haven't all got rigs on them.

Q. Well, those that have rigs.

A. I don't believe I can get that for you, Mr. Weil; that covers a pretty wide scope. We have all those figures in our inventories, but it requires a great deal of work.

An adjournment was here taken until Thursday, June 10th, 1920, at ten o'clock A. M.

471 Thursday, June 10, 1920.

And now, Thursday, June 10, 1920, the hour of 10 o'clock, A. M., having arrived, hearing resumed pursuant to adjournment.

T. O. SULLIVAN, recalled.

Direct examination resumed.

Mr. Weil:

Q. Mr. Sullivan, when we suspended yesterday, you had given us the amount of your capital investment, and I asked you to secure, if possible, certain other data which was not included in that capital investment. Can you give us the amount invested in the stocks of other companies in that particular field or section?

A. The Hope Natural Gas Company has invested in stocks of other companies $3,141,010. This does not include investments which it has in Liberty Bonds.

472 Q. Now, then, have you been able to obtain for me the cost of drilling the wells, which was excluded from that $37,500,000?

A. The Hope Natural Gas Company has spent in drilling wells and the purchase of wells, the sum of $21,316,028.48, which is not included in the sum of approximately $37,500,000, which I gave you yesterday as being the investments of the Hope Company in West Virginia.

Q. And those are the present wells of the company, to which you referred in your former testimony?

A. Yes, sir.

Q. Now, have you any data from which you can estimate the cost of laying the field lines,—which you said was not included in the thirty-seven millions—at the present time?

A. We do not have an exact account of the cost of these lines, of the labor cost of constructing these field and gathering lines; but estimating them, taking into consideration about the average length as near as we can arrive at it, and the cost of obtaining rights of ways and so forth, I would say that the labor cost would run from two to three thousand dollars per line.

Q. And how many of those? Just give us the aggregate.

A. Well, we have, I find, 3,567 wells, and each one of those would have to have a line, the cost of which, in my opinion, would approximate somewheres between two and three thousand dollars per well.

473 Q. And how many of them do you have?

A. 3,567 wells.

Q. Now, that would be $5.134,000, at $2,000?

A. Yes, sir.

Q. Then you would say it would be somewhere between five and seven millions of dollars, figured as between two and three thousand dollars?

A. That is my opinion.

Q. Now, have you obtained the figures on the cost of drilling wells,—which was not included in the thirty-seven millions?

A. The cost which is not included in the thirty-seven million would be included in this twenty-one million that I just gave you.

Q. Oh, it would be?

A. Yes, sir; and it also included the rigs, which you asked about yesterday.

Q. That also includes the rigs?

A. Yes, sir.

Q. Adding to your thirty-seven million five hundred thousand those items to which we have just referred, it would bring up that investment to between sixty-five and seventy millions of dollars, would it not?

A. It would bring that up to about $65,000,000.

474 Q. You stated yesterday that the Hope Natural Gas Company supplied the Peoples Company, the Fayette Natural Gas Company——

A. The Fayette County Natural Gas Company.

Q. —the Fayette County Natural Gas Company, the East Ohio Natural Gas Company——

A. Yes, sir.

Q. —the River Gas Company?

A. Yes, sir. The Northwestern Ohio.

Q. Well, I want to leave out the Northwestern Ohio for the present. State whether or not the Hope Natural Gas Company is, to these four companies, their chief source of gas supply; and if not, what is the fact in that particular?

A. The Hope Natural Gas Company is the chief source of supply for those four companies.

Q. The Hope Company is the chief supply of those four companies?

A. Yes, sir.

Q. Roughly estimated, what proportion of the gas of the Peoples Company would you say they obtain from the Hope Company, of its gas supply?

A. I do not have figures to show that, but I would estimate that they receive about 75 per cent of their supply from the Hope Company.

475 Q. And what about the Fayette?

A. The Fayette Gas Company, according to the best information I have, receives the major portion of its gas from the Hope Company, and only has a very small supply of gas of its own.

Q. Practically all then?

A. That is my information.

Q. And what about the East Ohio?

A. The East Ohio Company receives about 80 per cent of its supply from the Hope Company.

Q. And what about the River?

A. The River Gas Company receives the major portion of its supply from the Hope Company. Their own production is small.

Q. Give us the territory,—or rather, give us the names of the towns or cities in West Virginia that are supplied by the Hope Company directly?

A. The City of Parkersburg, West Virginia; the City of Mannington, West Virginia; the City of Sistersville, West Virginia; Paden City, West Virginia; Pine Grove, West Virginia; Fairview, West Virginia, and a number of smaller communities.

Q. Does it supply any of the local gas companies in West Virginia that supply towns or cities in West Virginia?

476 A. It does.

Q. What?

A. It supplies gas to the Light, Fuel and Power Company.

Q. Of where?

A. Of West Virginia. It is supplying gas to the Cities of Gassaway, Sutton and Burnsville, and two or three other smaller places. It supplies gas to the Clarksburg Light & Heat Company, who furnish gas in the City of Clarksburg, West Virginia. It is supplying gas to the West Virginia Heat & Light Company, who furnish gas in the City of Pennsboro, West Virginia, and Cairo, West Virginia. I think those are the only companies that it is supplying gas to or distributing gas to in West Virginia.

Q. Does it supply itself, the Hope Company directly, any of the towns or cities in Ohio or Pennsylvania, adjacent to the state lines?

A. It does not.

Q. Is it a part of your business, Mr. Sullivan, to keep advised as to the various gas fields developed throughout the country?

A. It is,—more particularly in the eastern section of the country.

Q. That is, in the eastern part of the United States?

A. Yes, sir.

477 Q. And to keep a general eye out for the whole United States?

A. Yes, sir.

Q. And are you familiar with all of the developed and prospective gas fields in the eastern part of the United States?

A. I am, in a general way.

Q. Are there any fields tributary to the cities and towns now being supplied by the companies which you have named, which are not now being developed and occupied by the various gas producing companies?

A. I know of no such fields. The territory adjacent to practically all of the large centers where natural gas is being supplied has been drilled and tested to a very considerable extent; so that it does not seem possible that any large fields are likely to be discovered in proximity to those centers of population.

Q. And have substantially all of the big operating companies, and many of the small, been conducting these pioneering developments for the purpose of discovering new gas deposits or fields, which would be tributary to this section for the last few years?

A. Practically all of them have been doing more or less development work, along those lines.

Q. That development work is called "wildcatting," is it not?

478 A. To some extent, it is,—where it is being carried on near territory that has not been previously tested. In many instances, old territory which has been practically abandoned is being drilled over and drilled to deeper sands than ever, to find new production.

Q. At the present time, take the situation as you know it to be: is there a sufficient supply of natural gas for the demands now being made upon the companies for their present consumption?

A. There is not.

Q. And during the last winter particularly, what was the general experience of the natural gas companies supplying the public, as to having shortages of gas or otherwise?

A. Practically all of the companies that I am familiar with had an insufficient supply of gas last winter to meet the requirements of their domestic consumers in the colder weather.

Q. There was a general shortage of natural gas with all the companies during those periods when the supply was most needed. That was the fact, wasn't it?

A. That was the situation.

Q. Is it possible at the present time, Mr. Sullivan, with the present developments, in known fields, and operations, for the gas companies you have described to obtain a sufficient supply of gas

479 to furnish their consumers during the coming winter?

A. In my opinion, it is not.

Q. In your opinion, then, there is bound to be a shortage?

A. Yes, sir, if the present demand and the demand of past years continues.

Q. I suppose the amount of that shortage of course will depend upon the temperature and weather conditions?

A. Very largely.

Q. You have testified to the delivery of gas to a number of these companies. I presume those deliveries are regulated by contracts in writing, are they not?

A. They are.

Q. Have you those contracts, or copies of them?

A. We have; contracts, I believe, with all of the companies that I have named on which deliveries are made outside of the state of West Virginia. In some instances, the supply of gas to companies in the State of West Virginia was arranged for by letters.

Q. Now, then, have you the contract with the East Ohio Company, dated March 1, 1910; with the Peoples Natural Gas Company, dated May 1, 1911; with the Fayette County Gas Company, dated May 1, 1910; with the Mountain State Gas Company; and the River Gas Company, dated April 1, 1910, which was assumed by

480 the Hope Company on April 1, 1910; the contract with the Northwestern Ohio Natural Gas Company, dated October 16, 1915; the contract with the Reserve Gas Company, dated April 11, 1913?

A. We have those contracts.

Q. Will you produce those, please?

A. Copies of them, or do you want the originals?

Q. Well, after showing them to counsel, we can no doubt substitute copies. While those contracts are being obtained, we might as well proceed, perhaps, and put them in a little later. Mr. Sullivan, do you know anything about the operations of the local companies in the State of West Virginia, and whether or not they made provision or reserved acreage, to look out for demands upon them for gas, as did the older, more experienced companies?

A. I only know about that in a general way. I do not have any direct information as to the acreage that any of those companies are holding, but through conversation with some of them, I have understood that the acreage that they were carrying under lease was very limited, and that they had not made provision sufficient to insure them a future supply.

Q. And that is true, is it not, of practically all of the local companies in West Virginia?

A. It is, according to the best of my information and belief.

481 Q. And, as a matter of fact, it is a part of your duty as the general manager of this Hope Company, to ascertain what general acreage is held by all of the different companies in the gas territory in the state, is it not?

A. It is, to certain extents. There are many of those things that are common knowledge. I haven't made any examination of the records or anything of that kind to ascertain that.

Q. No, of course not. Do you know when those local companies first began to organize as gas companies in the State of West Virginia? About that time, when they began to organize such companies?

A. The most of those companies have been organized in the last twenty years.

Q. Do you know whether or not they were organized by those having had prior experience and expert knowledge of the gas business?

A. I do not, of my own knowledge, but my general information is that the majority of them were organized by people who were unfamiliar with the business.

Q. Was it not a matter of general comment in the trade that most of these local companies that were organized to supply local communities with gas were not making any provision for the future in procuring territory and drilling wells, as was required by the
482 experience of those familiar with the natural gas business; and, in consequence, the companies generally officered by men of experience in the business, looked upon these organizations as temporary and not as being organized for the purpose of continuously supplying their respective communities? What are the facts as to that situation?

Mr. Steptoe: The question is objected to, both on account of its form and because any answer thereto would be irrelevant, immaterial and improper.

The Commissioner: Note the objection.

A. It has been a matter of comment among the officers of the larger companies that when these smaller companies were organized and supplying gas at different communities, that their life would probably be short, on account of the fact that many of them started in to supply gas with one or two wells, and it was generally believed that when the supply of gas from those wells became exhausted, that they would not care to invest the additional money necessary to secure territory and to drill other wells and lay the pipe lines necessary to connect up the wells which would be drilled at greater
483 distances than those which they were first using.

Q. Mr. Sullivan, do you know anything about whether or not these local companies, after they went into business, paid dividends upon their capital?

A. I do not.

Mr. Steptoe: The question is objected to.

Mr. Weil: He said he did not.

Mr. Steptoe: All right, if it is left there, the objection is withdrawn.

Mr. Weil:

Q. Do you know, Mr. Sullivan, anything as to the average consumption per domestic consumer in West Virginia, for the year 1919, as compared with other states?

A. I have a record of that, I believe, some place, but I have not got it with me now. I can get that, I think.

Q. I would like to have that if you have it; if you have made that calculation.

A. I will look it up. I am sure I have got it, if I can locate it, and I will look it up at dinner time.

Q. Make a note of that, so you can get me that at noon, if
484 you will, please?

A. Yes, sir.

Q. If the gas companies operating in West Virginia, in accordance with the terms and provisions of the statute in controversy here, were required to supply all such industries with their requirements of natural gas throughout the state, before transporting the gas elsewhere, what would be the effect upon the operation of your company and its ability to carry out its contracts with the companies to which you have already referred? Go into that question, without being specially interrogated, as fully as you can.

Mr. Hoffheimer: This is objected to, as calling for an opinion and conclusion of the witness. And for the further reason that the contracts in question or their performance can have no bearing upon the validity of the statute in question or the regulatory powers of the State of West Virginia. For the further reason that the witness has detailed no facts upon which a conclusion or opinion may be properly drawn or expressed; and for the further reason that the evidence is incompetent, irrelevant and immaterial.

485 The Commissioner: Note the objection, and take the answer.

A. If the provisions of this statute were put into effect, it would result in such a demoralization of the business as to make it impossible for us to fulfill our obligations under the contracts which we have made with other companies for a supply of gas outside of the state of West Virginia. It would also have the effect of making the service that we could render to those companies so unsatisfactory to their consumers that they would necessarily have to adopt some other means of providing heat in their homes. Natural gas service, in order to be at all satisfactory, has to be practically a continuous service. Unless it can be relied upon, the public generally would only use it for such purposes as could be dispensed with easily at any time. In addition to that, if the service is intermittent and unreliable, it creates a very dangerous condition. The fact that gas would have to be discontinued on short notice, and then might be turned back into the lines again on short notice, would create a very dangerous and unsatisfactory condition, and it would practically have the effect of rendering the service of little or no value to the consumers.

486 Q. What would be the effect of the enforcement of this Act with reference to the supplying of industries of the State of West Virginia their full requirement, as to increasing the amount of gas that those industries would take from the respective natural gas companies in the state?

Mr. Hoffheimer: We object, on the ground as stated in the last preceding objection.

The Commissioner: Note the objection.

A. There is no doubt but what if the industries in West Virginia could secure all of the gas that they need for their requirements, or could use, that it would very materially increase the quantity which they would take.

Q. Could you form any estimate, or have you any means of determining, the extent of this increase and its effect upon your gas supply to other sections?

Mr. Hoffheimer: The same objection.

The Commissioner: Note the objection.

487 A. We have attempted to make an estimate of the increased amount which consumers connected to our lines and closely tributary thereto, would require to take care of their business, if they were using natural gas for all purposes. And we estimate that that would be in the neighborhood of from sixty to seventy-five million cubic feet per day. If this quantity of gas was deducted from the quantity of gas which we are supplying to other companies, it would result in decreasing the amount which they require, which is insufficient for their requirements at the present time, so much that it would make the service to all of the companies very unsatisfactory, and inadequate for the requirements of their customers.

Q. As a matter of fact, this demand on the part of consumers in

West Virginia, under the conditions we have described under the operation of this statute, would be largest during the coldest days, just as the demands upon your lines are now largest during the coldest days, throughout the whole system, would it not?

A. That would no doubt be the result.

Q. That is the inevitable result?

A. Yes, sir.

Q. And at the present time, during those cold periods, you have not a sufficient supply now?

A. We do not have a sufficient supply now.

488 Q. And with this increased demand during those cold periods, which the operation of this statute would have, and which you have described, would it enable you to practically give any service to any of these companies upon your lines outside of the state and under these contracts that you have described? Would it enable you to give them substantially any service during those particular periods?

Mr. Hoffheimer: The question is objected to as leading. Also, because it calls for an opinion or conclusion of the witness, not only as to alleged matters of fact, but also as to the construction, the effect and the operation of the statute. Also, because the answer to the question must necessarily be speculative and involve elements not testified to, and for which no sufficient foundation has been laid. Also, because the evidence is incompetent, irrelevant and immaterial.

The Commissioner: Note the objection, and let the witness answer.

A. The service on cold days would be so poor that it would be practically of no value to the consumers of those companies.

489 Q. What would be the effect upon the operation of your lines of an order from the Public Service Commission of the State of West Virginia to make connections with and supply the deficit of other natural gas companies in the State of West Virginia, for which you had made no provision and which previously you were not supplying, during these cold periods I have already referred to?

Mr. Hoffheimer: The same objection.

Mr. Weil:

Q. The statute providing that the Public Service Commission should have the power and the right to compel any gas company in the state engaged in the transportation of gas to make connections with and supply the deficit to any other or all other gas companies in the state which had a deficit at the time?

Mr. Hoffheimer: We repeat our last previous objection, and also object to the erroneous interpretation of the statute involved in the question of counsel.

The Commissioner: Note the objection.

A. In many instances it would be practically impossible for us to comply with an order of that kind, under the present
490 construction of our pipe line systems. The lines are built with a view to delivering gas to certain communities. The compressing stations are installed for that purpose and with that end in view. A connection of that kind made on many of the suction lines in the field leading to these compressing stations would necessitate shutting down those stations, in order to permit the gas to accumulate in the suction lines and get a sufficient pressure from the natural rock that it would produce such a pressure as to force the gas to the points where it might be needed. It would have the effect of rendering a good portion of our equipment valueless for the purposes for which it was intended.

Q. And what would be the effect if this connection were made, or ordered, on some portion of your line after the gas had left the compressing station, between different compressing stations, as to the operation of your lines?

Mr. Hoffheimer: The same objection.
The Commissioner: Note the objection.

A. Then it would have the effect of taking whatever quan-
491 tity of gas might be required away from the other points where gas is already being supplied. Inasmuch as the quantity of gas available now is insufficient to meet the consumers' needs connected to the different lines, it would render that insufficiency larger by whatever amount was taken away.

Q. And what effect of disorganization would it have upon your operations, where no provision had been made for this particular demand at those particular times?

Mr. Hoffheimer: The same objection.
The Commissioner: Note the objection.

A. It would have the effect of creating a very chaotic condition, and of generally demoralizing the business. It would be almost impossible to operate under those conditions. In order to take care of any business, it is necessary to make some provisions, and if those provisions are interfered with, it certainly creates a very chaotic condition; more especially if that interference comes at times when all of the available supply is being utilized. It then creates a condi-
tion—I am frank to say I wouldn't know how to cope with it.
492 It would be so dangerous that I would be very much disinclined to comply with any order of that kind, if it came at a time when conditions were serious.

Q. As I understand your answer then, as a practical gas man, you don't know what you could do under those circumstances, to operate the lines?

A. Not if I complied with the order. I should feel very much inclined to disregard the order and take a chance on going to jail, possibly.

Mr. Hoffheimer: We move to strike out the answer.
The Commissioner: Let the motion be noted.

Mr. Weil:

Q. Mr. Sullivan, you stated that before you accepted this position with the Hope, which you now hold, you were with the Manufacturers Light & Heat Company for a number of years as its general manager?

A. Yes, sir.

Q. Now, as general manager of the Manufacturers Light & Heat Company, and as general manager of the Hope Natural Gas Company, have you information as to the quantities of gas that
493 were being used in former years by industrial plants in the State of West Virginia, before this shortage of gas became acute?

A. I did not have that information as to the Manufacturers Heat & Light Company. I know from my recollection of the quantities of gas supplied, that they supplied large quantities of gas for industrial purposes, but I haven't the figures in my mind.

Q. Now, from your recollection of the quantity of gas that was required by these industrial plants in West Virginia, both from your prior and present experience, what do you say as to those industrial plants, if they could receive all of the gas they desired for all of their operations, having a demand sufficient practically to take most of the gas produced in the state?

Mr. Hoffheimer: This is objected to; first, as assuming a condition not in accordance with the Statute. Secondly, as calling for an opinion and for a conclusion of the witness, and being speculative as to future conditions. And generally, because the evidence is incompetent, irrelevant and immaterial.

The Commissioner: Note the objection and take the answer.

494 A. In cold weather, when the demand of the domestic consumers would be large, if all the industries adopted the use of natural gas to meet all their requirements, then, in my judgment, there would be a demand to take practically all of the gas that the Hope Natural Gas Company produces. This might not apply to all portions of the State of West Virginia, but in the sections in which we are operating, there would be a demand for practically all of the gas that is being produced at those times.

Q. Can you give us the names of some of these large industrial plants using natural gas?

A. Yes, sir. The Whitaker-Glessner Company, of Wheeling, West Virginia. I may not be able to give the names of those companies exactly properly. The La Belle Iron Works, of Wheeling, West Virginia; the Warwood China Company; the Parkersburg Iron & Steel Company, at Parkersburg, West Virginia; the New Martinsville Glass Company, at New Martinsville, West Virginia; the Paden City Pottery Works, at Paden City, West Virginia; the Monongahela Iron & Steel Company, at Paden City, West Virginia; the Bowers

Pottery Company, at Mannington, West Virginia; the General Porcelain Company, at Parkersburg, West Virginia; the Vitrolite Company, at Parkersburg, West Virginia; the Hazel-Atlas Glass
495 Company, at Parkersburg, West Virginia; the Weirton Steel Company, at Weirton, West Virginia, and also at Clarksburg, West Virginia; the Owens Bottle Company, at Clarksburg, West Virginia. There are many others; I can't remember the names of all.

Q. How about the Wheeling Steel & Iron Company?

A. Well, I mentioned that. If I didn't, they are consumers of gas.

Q. What about the United States Window Glass Company?

A. Yes, sir.

Q. At Morgantown?

A. There is a company of that kind at Morgantown, West Virginia. I didn't attempt to name those companies at Morgantown, because I am not familiar with the names of the companies. We don't supply them.

Q. What about the Follansbee——

A. The Follansbee Company, at Follansbee, West Virginia, are large consumers of gas.

Q. Do you know the Homer Laughlin China Company?

A. I do. They are also large consumers of gas, on the lines of the Manufacturers Light & Heat Company.

Q. What about the Grasselli Chemical Company? Aren't they a very large consumer of gas, at Parkersburg?

A. Yes, sir; they consume considerable gas; just how much I don't know.

496 Q. Do you recall that the requirements of those companies at Morgantown alone, as disclosed in some litigation that is pending there now,—or has been—was nearly 8,000,000 feet of gas a day?

A. My recollection is that it was so testified in a suit in Morgantown.

Q. That was just for those located in that immediate district?

A. One or two glass companies—two or three glass companies, I think.

Q. Do you recall the period when inducements were offered by gas companies to industries to locate their plants in the State of West Virginia, on account of the cheap gas?

A. I recall having heard at different times that such inducements were offered and held out by various communities, in order to induce the location of factories and mills at certain points.

Q. Was this policy pursued, so far as you know, by any of the large, experienced gas companies?

Mr. Hoffheimer: That is objected to, as based on hearsay and calling for hearsay.

The Commissioner: Note the objection.

A. I do not know of any cases where offers of cheap gas
497 were made to manufacturers in order to get them to locate at certain places, but of course gas has been sold at a very cheap rate in a number of towns in West Virginia.

Q. Is there any difference between the industries located in West Virginia and those located outside of the State of West Virginia, using other fuel for their respective operations than natural gas? Is there any difference in that respect, advantageous or disadvantageous, between those companies, those industrial organizations, inside of the State of West Virginia or outside?

A. No; similar industries would be operated similarly, whether they were located within the state of West Virginia or outside of the state.

Q. What do you say as to the ability of those companies located in the state of West Virginia to use producer gas, or powdered fuel, such as coal, and so forth, or oil as fuel, as compared with the use of similar fuel by industries outside of the state?

Mr. Hoffheimer: This is objected to, because the witness has shown no competent knowledge on the subject; secondly, because the question calls for an opinion and a conclusion of the witness. Thirdly, because the evidence is incompetent, irrelevant and immaterial.

498 The Commissioner: Note the objection.

A. I know of no reason why industries in the State of West Virginia cannot use other fuel equally as well as industries outside of the state of West Virginia can use other fuel.

Q. From your knowledge and experience in the operation of natural gas companies, have you ever known of an instance in which the lines of a gas company were manipulated or operated, with reference to gas pressure, so as to destroy or for the purpose of injuring other operators in the same field?

Mr. Hoffheimer: This is objected to as calling for an opinion or conclusion of the witness.

The Commissioner: Note the objection.

A. I have never known of such a case. Of course, all of the companies, as far as I know, operating in the fields, endeavor to operate their lines and their compressing stations, in such a manner as to obtain the largest quantity of gas from the fields that they can get. That is done for the purpose of supplying their trade.

Q. What percentage of the open flow of a well, from your
499 experience would you say that well was putting into the line, against the varying pressure of the line, taken as a general average?

A. Of course that varies considerably, but as a general proposition, we figure that if we can obtain into the lines from twenty to twenty-five per cent of the open flow, that is all that we can do. Now, that condition changes somewhat as the volume of gas which the wells produce declines, and compressing stations are installed,

so as to take the gas away from the well at nearer—against nearer the same pressures that it would be flowing into the air against.

Q. It is charged in the Answer of the State of West Virginia that competitive leasing between the large natural gas companies has been, by some sort of agreement, eliminated, and this competition stopped. What are the facts as to this?

A. There is no such agreement, as far as my knowledge goes. And, as far as my knowledge goes also, there is just as much competition in leasing now, as between the companies, as there ever was—perhaps more so, as territory looks to be desirable. The quantity of territory which is considered as being desirable is very much less than it was in years gone by, when new territory was being developed right along.

500 Q. What do you say as to this competitive leasing by the respective gas companies and the drilling of wells producing the situation which you have described, which necessitates the marketing of the gas?

A. In my opinion, it is more pronounced now than ever before. As the available gas declines and the companies are short and unable to supply the gas that the customers need, they are making more and stronger endeavors to obtain territory that looks as though it might be productive of gas; and their drilling operations are much stronger, in an endeavor to get gas, than they were in previous years.

Q. Where territory is drilled that way, by any company, and gas found in the wells and turned into the lines, what is the effect of that upon other companies owning gas in the same field, if they do not take out their gas from their wells at the same time, as far as possible?

A. The effect is generally for the gas in the sands to flow in the direction of the wells that are being utilized,—where the pressure is lowest in the sand. It has an effect, if one company is taking out gas and utilizing its wells and the other company is not, and their wells shut in, the tendency is for the gas to flow in the direction of the wells that are being used, on account of the pressure in

501 the rock being reduced at that point more than where the wells are shut in.

Q. What has been your experience in that respect, even when you open the wells that have been shut in?—Do you regain the natural flow, or does that condition which you have described continue, notwithstanding the fact that you subsequently open your own wells?

A. We oftentimes, after a well has been shut in and we open it up, find that the pressure in the well has decreased; that some of the gas has gone to some other point.

Q. And you never regain it?

A. No; as a general proposition, it never comes back. After it is once gone it is gone forever.

Q. Have you any means in the trade of knowing just how far one gas well will affect another?

A. There is no way that I know of, or that I think anybody else knows of, to determine that definitely.

Q. How far have you, in your own experience, known of one well draining or affecting another gas well—what distances?

A. I would say that I have known cases where one well affected another for a distance of half a mile to a mile. In other instances, though, I have known of cases where wells were located quite close together, and one did not affect the other. It depends very
502 largely on the character of the sand; whether it is an open, porous sand, or a hard close sand, as to how far one well will affect another.

Q. There is no way to tell that, is there, except to drill the well and wait and see?

A. That is the only way that I know of. After wells are drilled in, and the rock pressure ascertained, if those wells are shut in and continued to maintain the rock pressure which showed when they were first drilled in, then they are not being affected. But on the other hand, if the pressure declines while the well is shut in, it indicates very clearly that the gas is going some place.

Q. What is the rule of the Hope Natural Gas Company as to giving a preference to domestic consumers over industrial consumers, in the event of a shortage of gas on the lines, and not sufficient to supply both?

A. There has always been a rule of the Hope Natural Gas Company to give the domestic consumers the preference.

Q. That is the general rule, is it not, of all natural gas companies engaged in the business?

A. It is, as far as my knowledge goes.

Q. And has been for many years, has it not?

A. Always, since I have been connected with the business.

503 Q. You have described already, partly the effect of the enforcement of this statute upon the operations of your lines, and some of the dangers you adverted to, of operating the line under such circumstances. I wish you would state a little more fully what you mean by dangers to life and health and so forth of the domestic consumers on your line who are dependent upon gas transported from your lines and delivered to these other companies for the supply of domestic consumers, in the event of your being compelled upon orders of the Public Service Commission or otherwise, to give preference to industrial consumers and others in the State of West Virginia? Go into that as fully as you can, without being specially interrogated.

Mr. Hoffheimer: That question is objected to, in so far as it involves an assumption that the statute in question requires a preference to consumers of the State of West Virginia.

The Commissioner: Note the objection and take the answer.

A. The danger is caused by the decline in the pressure, which will occur if any large quantities of gas were diverted from places where it was being used. It many times will occur that
504 people are away from home, and they leave certain fires or lights burning in their homes. If the pressure drops to a pressure that some of those fires or lights became extinguished, and then came back on slightly again, there would be an escape of

gas into the buildings, which would cause explosions, or might cause loss of life to people who were in the buildings. If this were to occur at night—people frequently retire leaving certain fires and lights burning—and if anything should occur during the night whereby those fires and lights were extinguished and the gas escaped into the rooms, it would be very dangerous and might ignite and cause explosions that would do almost unlimited damage. It would be impossible to estimate what a condition of that kind might bring about.

Q. And what would be the effect on the consumers of natural gas in Pennsylvania and Ohio if this gas were diverted to industries and other consumption in West Virginia, during the cold weather, under present conditions and otherwise?

A. It would have the effect of reducing their supply; and in many instances, as I stated before, it would no doubt make the supply so unsatisfactory that they would be compelled to discontinue its use entirely, for heating purposes anyway and maybe
505 for lighting also. It would all depend on how large a quantity was required in West Virginia. But with the present shortages which exist in the States of Ohio and Pennsylvania, any additional quantity taken out of the lines would have a very detrimental effect on the service in other states.

Q. What would you say would be a fair estimate of the average cost to the present domestic consumers in the States of Pennsylvania and Ohio, now using natural gas, to change their appliances to other fuel, where those appliances could be changed without reconstruction of the houses? What would be a fair average, or have you made any figures upon that subject?

A. I have attempted to make figures upon it, but it is rather a difficult thing to do, to arrive at an average, of course. It is a very easy matter to estimate what the cost would be of changing any particular house, by making an examination of it and seeing what it is necessary to do; but as far as I have been able to figure it out, an average price would probably—would be between two and three hundred dollars per house. That might be more or might be a little less. I don't think it would be any less; my judgment would be that it would be more, if anything.

Q. It would cost each consumer then from two to three
506 hundred dollars to change his appliances from natural gas, as now used, to other fuel?

A. It would, at the present time, in my opinion.

Q. In the operation of a natural gas company, there is what is usually called, or frequently referred to, the peak load?

A. Yes, sir.

Q. Now, tell us what the peak load is, in your experience as a natural gas man?

A. The peak load is the demand created by the increased quantity of gas required by consumers on cold days and at certain hours of the day. In cold weather, on an extremely cold day, the demand of the average domestic consumer will be from four to five times greater than it is on the normal day. Then there are certain hours in the

day when the demand is very considerably increased above the normal demand; that is, from about 6:30 to 8:30 in the morning, during the time that breakfasts are being prepared. Then again, from about 11:30 to 1:30 in the afternoon, while the mid-day meal is being prepared. And again, from about five o'clock in the evening to seven o'clock, when supper is being prepared. This creates a very increased demand, which probably at times is as high as 15 to 20 times more than the regular average daily load. Of
507 course, the demand in the winter season—the normal demand in the winter season, is considerably larger than the normal demand in the summer season, probably about four times.

Q. What was your estimate of the maximum peak load over the other period, what per cent?

A. About 15 per cent.

Q. How much?

A. 15 to 20 per cent.

Q. No, I say the maximum peak load.

A. Well, that is what I said, the maximum peak load, about 15 to 20 per cent more than the normal load.

Q. Do you mean 15 or 20 per cent, or do you mean 15 or 20 times as much?

A. 15 to 20 times, is what I mean.

Q. That is what I thought. From 1,500 to 2,000 per cent is what you mean, isn't it?

A. Well, you put it in percentage; I hadn't figured it out that way. I should have said 15 or 20 times.

Q. From 15 to 20 times as much, the peak load is, as the normal load?

A. Yes, sir.

Q. Now, does the Hope Natural Gas Company supply any of the municipalities and governmental institutions with gas?

508 A. They do.

Q. Such as what? Just in a general way describe some of them.

A. Such as water works in the towns that we are supplying gas to; post office buildings; some dams, government dams; and court houses and buildings of that character.

Q. Any hospitals?

A. A good many hospitals and churches and public schools. All those kind of——

Q. Public buildings?

A. Public buildings and institutions.

Q. You mean, you contract, I suppose, in some instances, with the state, and in some instances with the United States government, and in some instances with the municipal authorities?

A. Yes, sir.

Q. You have produced, in accordance with the request made awhile ago, copies of contracts between the Hope and the Fayette County Gas Company, dated May 1, 1910. And between the Mountain State Gas Company and the River Gas Company, dated April

1, 1910; I will ask you if the performance of that contract was taken over and assumed by the Hope Natural Gas Company?

A. It was.

509 Q. Also the agreement between the Hope Natural Gas Company and the East Ohio Gas Company, dated March 1, 1910; and the Hope Natural Gas Company and the Northwestern Ohio Natural Gas Company, dated the 1st day of January, 1906, and the agreement between the Hope Natural Gas Company and the Peoples Natural Gas Company, dated the first day of May, 1911, and the agreement between the Hope Natural Gas Company and the Northwestern Ohio Natural Gas Company, dated the 16th day of October, 1915; and the agreement between the Reserve Gas Company, the Union Natural Gas Corporation, the Hope Natural Gas Company, the Connecting Gas Company and T. N. Barnsdall, dated the 11th day of April, A. D. 1913. I ask you if those are the contracts to which you referred in your testimony and which I asked you to produce?

A. Let me see them.

(Papers shown witness.)

Q. Or copies of them, rather. Suppose you look those over. It is time for the noon adjournment now, and you can answer the question after lunch.

Here a recess was taken until 1:30 o'clock, P. M.

510 Thursday Afternoon, June 10, 1920.

And now, the hour of 1:30 o'clock having arrived, hearing resumed pursuant to adjournment.

T. O. SULLIVAN resumes the stand.

Direct examination (continued).

Mr. Weil:

Q. Mr. Sullivan, I called your attention this morning to certain contracts which you identified, and which I now propose to offer in evidence, to wit: Copy of contract between Hope Natural Gas Company and the Northwestern Ohio Natural Gas Company, dated the 16th day of October, 1915—that contract is now in operation and in force between those respective companies?

A. It is.

(Contract just identified marked as Pennsylvania Exhibit No. 16.)

Q. I next show you contract between the Hope Natural Gas Company and the Peoples Natural Gas Company, dated May 1, 1911. Is that contract now in force between those respective com-

511 panies?

A. Let me see that contract—(Paper handed Witness)—It is.

Contract just identified by the witness marked as Pennsylvania Exhibit No. 17.

Q. I now show you contract between the Reserve Gas Company, the Union Natural Gas Corporation, Hope Natural Gas Company, Connecting Gas Company, and T. N. Barnsdall, under date of 11th day of April, 1913, and ask you if that contract is now in force and operation between the respective companies?

A. It is.

Contract just identified by the witness marked as Pennsylvania Exhibit No. 18.

Q. I now show you contract between the Hope Natural Gas Company and the East Ohio Natural Gas Company, under date of March 1, 1910, and ask you if that is in force between those respective companies?

A. It is.

Contract just identified by the witness marked as Pennsylvania Exhibit No. 19.

512 Q. I show you contract between the Mountain State Gas Company and the River Gas Company, under date of April 1, 1910, which you stated this morning was taken over, and the covenants thereof assumed, by the Hope Natural Gas Company, and ask you if that is now in force between the Hope Natural Gas Company and the River Gas Company?

A. It is.

Contract just identified by the witness marked as Pennsylvania Exhibit No. 20.

Q. I show you contract between the Hope Natural Gas Company and the Fayette County Gas Company, under date of May 1, 1910, and ask you if that is now in force between the respective companies?

A. It is.

Contract just identified by the witness marked as Pennsylvania Exhibit No. 21.

Mr. Weil: I now offer in evidence Exhibits marked Pennsylvania Exhibits Nos. 16 to 21, inclusive, being the copies of contracts identified by the witness, the originals of which are in the possession of the company, and to which counsel for the defendant will be
513 given access, and an opportunity to examine whenever they may desire; and I ask that counsel for defendant stipulate and agree that these copies may be offered in evidence with like force and effect as the originals, subject to that stipulation.

Mr. Hoffheimer: There is no objection to the substitution of the copies for the originals.

Mr. Weil: And I would state that whenever counsel for the defendant desire to examine the originals, at any time during the hearings, if they will notify us to that effect, we will produce the originals for their use.

Mr. Weil:

Q. I asked you this morning, Mr. Sullivan, if you could give me the figures comparing the amount of gas furnished to the domestic consumers of the Hope Natural Gas Company in West Virginia, and the amount of gas furnished to domestic consumers in other states by the companies which are supplied with gas by the Hope Natural Gas Company, and I would ask you now if you have obtained those figures? Just answer whether you have obtained the figures.

A. I have obtained the figures showing the average amount
514 of gas used, by months, per consumer, on the lines of different companies, over a certain period of time.

Q. Over what time?

A. From January 1, 1917, to April 30, 1919, a period of two years and four months.

Q. Now, then, give us the average amount of gas that was supplied by the Manufacturers Light and Heat Company, the Fayette County Gas Company, the Peoples Natural Gas Company, and the East Ohio Natural Gas Company, being the amount supplied per month to all of the domestic consumers upon the lines of those respective companies.

A. During the period from January 1, 1917, to April 30, 1919, covering two years and four months, domestic consumers on the lines of the Manufacturers Light and Heat Company in the States of Ohio and Pennsylvania, consumed 9,883 cubic feet per month. During the same period, consumers on the lines of the Fayette County Gas Company in Pennsylvania consumed 9,209 cubic feet per month. During the same period, consumers on the lines of the Peoples Natural Gas Company in Pennsylvania consumed 11,592 cubic feet per month. During the same period, consumers on the lines of the East Ohio Natural Gas Company, in Ohio, consumed 9,845 cubic feet per month. When I speak of consumers, I am referring to domestic consumers in all instances.

515 Q. During this same period, what was the amount of gas consumed by the domestic consumers in West Virginia, on the lines of the Hope Natural Gas Company?

A. During the same period, domestic consumers on the lines of the Hope Natural Gas Company in West Virginia consumed 13,285 cubic feet per month.

Q. From your knowledge and experience in the natural gas business and the operation of natural gas companies, if those companies engaged in furnishing, or required by law to furnish, natural gas for public use, or for the use of the public, for domestic, industrial or other consumption, within the state of West Virginia, are compelled to furnish a supply of natural gas reasonably adequate for the purposes, whether domestic, industrial or otherwise, for which natural gas is consumed, or desired to be consumed, by the public, or any part of the public, within the state of West Virginia, within what length of time, in your opinion, would the demand for natural gas in the State of West Virginia, for domestic, industrial and other

purposes, as defined by the Act now in controversy, take substantially all of the gas produced in the State of West Virginia?

Mr. Hoffheimer: That is objected to as incompetent, irrelevant and immaterial, as entirely speculative, and as having no
516 bearing on the validity of the statute in question, or upon the issues in this case.

The Commissioner: Let the objection be noted. The witness may answer.

A. If the different natural gas companies operating in the State of West Virginia were compelled to furnish all of the gas that might be required for use within the state, in my opinion it would be only a comparatively short time until there would be sufficient demand to use all of the gas that is produced. I base this opinion upon the desires which have been expressed by different firms and persons using gas within the state, of what their requirements would be, if they could obtain all the gas they needed. I also understand that in certain industries natural gas is very much better adapted for certain purposes than any other fuel that can be secured. And in view of that, it would no doubt cause other manufacturers outside of the State of West Virginia, to locate in the state, on account of the advantages which they would obtain by the use of this fuel. Taking these matters into consideration, I feel satisfied that it would be only a
517 comparatively short time, possibly a year, maybe two years, until there would be a demand developed within the state that would use all of the gas that might be produced.

Mr. Hoffheimer: I move to strike out that answer, on the grounds stated in the objection to the question, and for the further reason that the answer is in a large degree based on hearsay.

The Commissioner: Let the motion be noted.

Cross-examination.

By Mr. Steptoe:

Q. Mr. Sullivan, I believe you took charge, as general manager and vice president of the Hope Company July 1, 1918?

A. Yes, sir.

Q. And prior to that time, for some eight years approximately, you were the general manager of the Manufacturers Light and Heat Company?

A. I was.

Q. Who was the former general manager of the Hope Company?

A. Mr. John G. Pew.

Q. And for how long?

A. I am unable to tell that exactly, but my recollection is, since about 1906—Yes, I think 1906 is correct.

518 Q. Are you more or less familiar with the officers and management of the other companies you have testified about, especially the Peoples and the Reserve?

A. I am.

Q. Was there not a change in the management of the Peoples and the Reserve about the same time that you became general manager of the Hope?

A. There was.

Q. Who are the present general managers of those two companies?

A. Mr. John B. Tonkin is the general manager of the Peoples Natural Gas Company, and Mr. John B. Corrin is the general manager of the Reserve Natural Gas Company.

Q. Prior to their becoming such general managers, who had the management of those two companies?

A. I understand that Mr. John G. Pew had the management of both of those companies prior to July 1, 1918.

Q. And for about the same length of time that he occupied that position with the Hope Company?

A. No. Mr. Pew had charge of the Peoples Natural Gas Company for a longer period of time, or previous to his assuming the managership of the Hope Natural Gas Company, and my recollection is that he became general manager of the Reserve Natural Gas Company at a later date than he did of the Hope Company, al-
519 though I am unable to state positively, or when that date was.

Q. The Hope Company and the Reserve Company were largely managed and operated by the same officials, were they not?

A. They were, previously.

Q. And practically the same field force and superintendents?

A. No, each of the companies has its own field force and its own local foreman or superintendent.

Q. And how about the general superintendent?

A. The general superintendent of the Hope Company also has general charge of the Reserve Gas Company, but has no connection with the Peoples Natural Gas Company at all.

Q. My question referred to the Hope and the Reserve only. And there the management is largely the same?

A. The management is not. The general managership is entirely different, but the general superintendent of the Hope Company has charge of the operating—field operations, in a general way, for both companies.

Q. In the time of Mr. Pew they did have the same general manager?

A. That is my information.

Q. Now, when you were, during some eight years, the general manager of the Manufacturers Light & Heat Company, what
520 were your duties and what was your jurisdiction as general superintendent?

A. As general manager.

Q. As general manager?

A. I had charge of the general operations of the Manufacturers Light & Heat Company in all departments, taking in the production of natural gas, drilling of wells, laying of field lines, operation of compressor stations, distribution and sale of gas, and all other parts of the operation of the company.

Q. And that jurisdiction and management, of course, covered the subsidiaries or controlled companies of the Manufacturers Light & Heat Company about which you have testified—or I mean, about which Mr. Quay testified?

A. It did.

Q. Do you know Mr. George W. Crawford?

A. I do.

Q. What connection has he with those companies?

A. Which companies do you refer to?

Q. I mean the Hope, the Reserve and the Peoples.

A. To my knowledge, Mr. Crawford has no connection whatever with either of those companies.

Q. Has he ever had any connection with them in an official capacity or interested as a stockholder or otherwise?

A. Not to my knowledge.

521 Q. Who is Mr. Crawford? Where does he live?

A. Mr. George W. Crawford maintains an office in the First National Bank Building, City of Pittsburgh, Pennsylvania. I understand when he is in town that he lives at the Duquesne Club, a portion of the time. When he is out of town, I am unable to tell where he does live.

Q. I want to know in what business he is engaged now?

A. I am unable to give you that information. I do know that Mr. Crawford is connected in some capacity with the Ohio Fuel Gas Company,—I believe is the name of the company,—No, Ohio Fuel Supply Company; but I am unable to say at this time whether he is an officer or not.

Q. Do you know Mr. John G. Porter?

A. I do.

Q. Is he interested in the gas business, and if so, how?

A. I am sure I don't know; I do know that Mr. Porter is connected with the Fisher Oil Company, or operating more particularly in the oil business. He may be interested in the gas business, for all I know.

Q. To be specific, Mr. Sullivan: these two gentlemen—Mr. Crawford, Mr. Porter and John G. Pew are mentioned in the Manufacturers Light & Heat Company with the Hope Company, as a committee to supervise the distribution of some two hundred thousand dollars. I want to know what was their interest in the transaction, or either of those two companies? You need not reply as to Mr. Pew.

522 A. I am unable to answer that question; I have no information as to what their interests were as to the distribution of that money.

Q. Now, with reference to the acreage of the Hope Natural Gas Company, I believe you testified that there was about 1,009,000 acres total territory in West Virginia, held by the Hope Company, and that 322,777 acres had been developed. By "development," do you mean fully developed or merely operated in the sense that a well had been drilled upon the various farms making up that acreage?

A. I believe I explained in my testimony that by "operated acre-

age," I meant farms or parcels of land upon which wells had been drilled.

Q. Then that would not necessarily mean that those farms had been fully developed, would it?

A. It would not mean that there might not be room for the location of other wells on the same farms.

Q. Practical gas operators have an idea of how many wells should be drilled, under ideal conditions—that is, assuming that there is no drainage or competition—to the acreage, have they not?

A. That has been estimated by numerous people as to about the number of wells that it would be advisable to drill on a certain number of acres.

523 Q. What in your judgment, under average conditions and in the absence of competition, is about the proper acreage that should be assigned to a well?

A. That depends very largely upon the nature of the sands. If the territory or sand is open and porous, wells ought not to be drilled as closely as they would be drilled in territory where the sands are hard and close. Ordinarily, in my judgment, about one well to a hundred acres is sufficient.

Q. Would that exhaust, in your judgment, all of the gas under that hundred acres?

A. I think, speaking generally, that it would. Of course, as I stated, if the sands were close, then it might be advisable to drill more than one well on a hundred acres. There might be instances where it might be advisable to drill two or three wells on a hundred acres, and there might be instances where it might not be advisable to drill more than one well on two or three hundred acres,—depending on the nature of the sand entirely.

Q. In what counties of West Virginia does the Hope Gas Company operate and produce gas itself?

A. The Hope Gas Company is operating in Monongalia, West Virginia; Wetzel County, Doddridge County, Marion County, Tyler County, Harrison County, Calhoun County, Gilmer County,

524 Lewis County, to a small extent in Brooke County, Ritchie County, Wood County; there might be one or two other counties that I have not mentioned,—also Pleasants County; but the counties I have named take in the bulk of our operations.

Q. How about Wirt?

A. To a small extent in Wirt County.

Q. And Upshur?

A. We may have some little operations in Upshur County not very large, if any.

Q. And Braxton?

A. To some extent in Braxton, yes, sir. A little operation in Barbour County.

Q. What about Taylor?

A. Taylor, yes, sir, some operations there. Marshall County also.

Q. The counties you have mentioned are not a complete list of all the gas producing counties in West Virginia, are they?

A. They are not.

Q. There are a number of counties south of the most southern counties you have mentioned, in which gas is produced and marketed commercially?

A. There are.

525 Q. And the Hope Company holds leases in all of the counties you have mentioned, does it?

A. Yes, sir, more or less.

Q. And buys gas in all of those counties?

A. I can't say we are buying gas in all of those counties, but we are willing to buy gas in any of those counties, providing it is close enough to our lines that it can be gotten with a reasonable expenditure.

Q. When did the Hope Natural Gas Company begin to furnish the City of Parkersburg?

A. Somewhere about April, 1910. I cannot give the exact date that they commenced to supply gas to Parkersburg.

Q. As a matter of fact, it acquired the service of Parkersburg as a part of taking over the Mountain State Gas Company, did it not?

A. It did.

Q. What other towns were taken over for service, by reason of the same transaction—that is, the purchase of the Mountain State?

A. I am unable to answer that question. There may have been some smaller towns which the Mountain State were supplying, which were taken over at the same time that that contract was taken over, but I am not familiar with the conditions at that time, that

526 would enable me to state.

Q. How about Sistersville?

A. I am unable to say whether Sistersville was taken over from the Mountain State Gas Company at that time or not. Just how the Hope Company acquired the City of Sistersville, I do not know. I am inclined, however, to think that it was a part of that contract.

Q. Do you know anything about the Mountain State Gas Company—where it did business?

A. I know that it supplied gas to the City of Parkersburg, and that it held leases and operated in Pleasants County, West Virginia, possibly in other counties also, that they had a pipe line—or there was a pipe line, at least—through which gas was transported from Pleasants County, West Virginia, to Parkersburg, and possibly to other points, but beyond that I am not familiar with conditions surrounding the Mountain State Gas Company.

Q. Do you know whether that company is now in existence?

A. I understand that it is not. That is the information I have.

Q. And did the Hope Company acquire all of this property and assests at the time it took over this service?

A. My information is that the Hope Company acquired all of its property and assets in the state of West Virginia. Whether

527 they had any outside of the state or not, I don't know, and if so, the Hope Company did not acquire those.

Q. Do you know whether the Mountain State Company was ever in business and had holdings in Harrison and Doddridge County?

A. I do not.

Q. Are you able to furnish us from the records of the Hope Company with a statement that would show, from the year 1910 to date, the acreage held by the Hope Company, both developed and undeveloped; also the number of wells?

A. 1910, did you say?

Q. Yes, sir, to date.

A. Number of wells each year?

Q. Yes, sir. I mean the total for that time.

A. All right.

Q. Also, the production and the amount of gas purchased annually. Also, the quantity of gas sold and marketed to each of the various companies to which the Hope Company sold, naming the companies. Also, the sales in West Virginia to domestic consumers, industrial consumers and the quantity sold in the field, including also the amounts consumed in conducting the operations of the company—running compressors, and so forth.

A. Do you wish to have that all separated, or totals?

Q. As your records show it, will be satisfactory.

528 A. I think I can give you some of that information now.

Mr. Weil:

Q. Suppose you give us what you have of that now.

A. In the year 1910, the Hope Natural Gas Company held under lease 994,825 acres, of which 151,838 were classed as operated acreage, and 842,987 acres were classed as unoperated acreage.

For the year 1911, under lease, 1,066,404 acres, 176,670 acres of which were classed as operated, and 889,734 acres classed as unoperated.

1912, under lease, 909,884 acres, of which 198,242 acres were classed as operated, 711,641 acres classed as unoperated.

1913, 918,930 acres, of which 220,132 acres were classed as operated, and 698,798 acres was classed as unoperated.

1914, under lease, 819,880 acres, 243,112 acres classed as operated, 576,768 acres classed as unoperated.

1915, 928,301 acres, of which 254,997, classed as operated, and 673,303 acres classed as unoperated.

1916, under lease, 1,258,638 acres, 276,931 acres of which
529 were classed as operated acreage, and 981,706 acres classed as unoperated.

1917, under lease, 1,166,471 acres, 302,936 of which was classed as operated, and 863,535 classed as unoperated.

1918, under lease, 1,115,503 acres, 315,037 acres classed as operated, and 800,466 acres classed as unoperated.

1919, under lease, 1,009,933 acres, 322,777 of which was classed as operated acreage, and 687,155 acres classed as unoperated acreage.

During the same period, the Hope Natural Gas Company had the following number of producing gas wells:

1910, 1,326 wells.
1911, 1,659 wells.
1912, 1,940 wells.
1913, 2,246 wells.

1914, 2,542 wells.
1915, 2,692 wells.
1916, 2,997 wells.
1917, 3,300 wells.
1918, 3,410 wells.
1919, 3,440 wells.

During the same period, commencing with the year 1910, the Hope Natural Gas Company purchased 22,889,861,000 cubic
530 feet of gas,—that is, in the year 1910. And during the same year they produced from their own wells 46,874,231,000 cubic feet of gas.

During the year 1911, they purchaser 33,775,917,000 cubic feet; and produced 38,117,453,000 cubic feet.

During the year 1912, they purchased 32,014,727,000 cubic feet; produced 46,427,111,000 cubic feet.

During the year 1913, they purchased 31,077,215,000 cubic feet; and produced from their own wells, 47,953,239,000 cubic feet.

The year 1914, they purchased 26,604,201,000 cubic feet; produced from their own wells 43,788,747,000 cubic feet.

In the year 1915, they purchased 20,916,491,000 cubic feet; produced from their own wells 46,350,733,000 cubic feet.

In the year 1916, they purchased 26,261,531,000 cubic feet; produced from their own wells 81,318,666,000 cubic feet of gas.

In the year 1917, they purchased 30,857,488,000 cubic feet; produced from their own wells 73,969,909,000 cubic feet of gas.

In 1918, they purchased 27,986,543,000 cubic feet; produced
531 from their own wells 58,323,670,000 cubic feet of gas.

In the year 1919, they purchased 20,647,040,000 cubic feet of gas; produced from their own wells 47,298,392,000 cubic feet.

Now, as to the wells in West Virginia during the same period, commencing with 1910, the Hope Company sold for domestic use, in the state of West Virginia, in 1910, 1,376,490,000 cubic feet of gas; for industrial use, 2,411,643,000 cubic feet. In 1911——

Mr. Steptoe:

Q. Just a moment. How about field service,—that was included in the question.

A. Field service is included in industrial gas.

Q. All right, go ahead, proceed in your own way.

A. I was just thinking whether I was right in saying field service was included in that or not; I believe it is, but I don't want to make that as a positive statement.

In 1911, for domestic use, 1,906,358,000 cubic feet of gas; for industrial use, 3,043,346,000 cubic feet.

1912, sold for domestic use, 2,014,614,000 cubic feet; for industrial use, 3,288,577,000 cubic feet.

532 1913, sold for domestic use, 1,948,850,000 cubic feet; for industrial use, 3,858,992,000 cubic feet.

1914, sold for domestic use, 2,100,765,000 cubic feet; for industrial use, 3,870,000,000 cubic feet.

In 1915, sold for domestic use, 2,120,929,000 cubic feet; for industrial use, 3,706,342,000 cubic feet.

In 1916, sold for domestic use, 2,211,045,000 cubic feet; for industrial use, 4,906,571,000 cubic feet.

1917, sold for domestic use, 2,534,237,000 cubic feet; for industrial use, 5,040,991,000 cubic feet.

1918, sold for domestic use, 2,573,927,000 cubic feet; for industrial use, 4,254,123,000 cubic feet.

For the year 1919, sold for domestic use, 2,512,816,000 cubic feet; for industrial use, 3,869,729,000 cubic feet.

I believe that the amounts of gas given as having been sold for industrial use include the quantity of gas sold in the field and used by the company in its compressing stations, but I can have this looked up and verified.

Q. And as I understand, you cannot tell me until further investigation whether the field service and consumption for compressor stations is or is not included in the industrial consumption given?

A. It is my impression that it is included, but, as I said,
533 I would like to verify that, I may be wrong on that.

Mr. Weil:

Q. Well, you can verify that by tomorrow morning?
A. I can.
Q. And give counsel the exact information with reference to it?
A. Yes, sir.

Mr. Steptoe:

Q. Without being exact as to number, there are a great number of individuals and small producing companies from which the Hope Company purchases, are there not?

A. There is quite a large number.

Q. Where are those located, or are they located generally throughout the producing fields?

A. They are located principally in some of the counties where the operations are oldest, were first commenced.

Q. In the older fields, or portions of the fields?

A. In the older fields. Some in Doddridge County, some in Pleasants County, some in Monongalia County, some in Lewis County, some in Calhoun County, but principally in the counties in which the first developments took place—or the earlier developments took place.

Q. It would embrace particularly Wetzel, Monongalia,
534 Marion, Tyler, Harrison and Lewis Counties?

A. Taking in all of those counties, I think we have gas purchase contracts in all of them.

Q. Is the gas so purchased turned into what you refer to as high-pressure mains or medium-pressure mains, or into the gathering lines?

A. The gas is almost invariably taken into the gathering lines, or what we term suction lines.

Q. The map which you have filed as Pennsylvania Exhibit No. 15, I believe, shows only the high-pressure and medium-pressure transmission lines, but no gathering lines, as you stated?

A. Few, if any, unless there might have been some lines put on the map originally which were high-pressure lines, but have now been changed over to low-pressure lines, and connected to the suction lines to the stations.

Q. Do the suction lines generally lead into the compressor stations?

A. Invariably.

Q. And are those suction lines at all of the compressor stations?

A. Yes, sir; there have to be suction lines to all of the stations to enter the compressor station. That is what is termed usually the suction lines, in gas parlance. That means the lines leading
535 from the wells to the compressors.

Q. Is there any compressor station on your lines which is simply a forwarding station of gas sent through a transmission line from another forwarding or compressing station?

A. There are stations on our lines which receive gas which is forwarded to it from another compressing station—if that answers the question.

Q. But that same compressor station also receives gas from suction lines, in addition to that received from the transmission lines?

A. It does, in most instances.

Q. And those suction lines are not only gathering lines to your own wells, but gathering lines from the gas purchased from individuals and smaller companies?

A. That is true.

Q. Your company purchased from the United Fuel Gas Company a large quantity, under contract, does it not?

A. We attempted to purchase from them large quantities, but we did not get such awfully large quantities.

Q. You are purchasing under contract——

A. We are.

Q. —some gas. What is the point of delivery?

536 & 537 A. Cedarville—a place called Cedarville, in Gilmer County, West Virginia.

Q. That is the point of connection between the lines of the Hope Company and the lines of the United Fuel Company?

A. Yes.

Q. Is that gas forwarded from Cedarville through any particular lines?

A. That gas from Cedarville is forwarded through the lines leading to Hastings Station in Wetzel County, West Virginia; but the various branch lines are so connected that it can flow to other points.

Q. It may go through several lines to Hastings Station?

A. It could go through several lines to Hastings Station. Of course, there are gate valves installed on these various branch lines, and if those valves are closed, then it confines the gas to the direct line to Hastings station; but if those valves on the branch lines are open, then that gas can go to other points in the system.

Q. Those gate valves are a part of the operation of the system?

A. They are. They are sometimes open and sometimes closed.

Q. That is, according to the exigencies of the operation?
A. Exactly.

Q. The production from the Hope Gas Company's own
538 wells and the production by the companies from which the Hope purchases is fed into that line along the route—the various branch lines, at the compressor stations.

A. Yes, if there are any of those purchasers located along that line, the gas which is going through the different stations would be fed into that line at times, or into the discharge lines from the compressing station through which it was going to pass.

Q. What compressing stations are there on the route from Cedarville to Hastings Station?

A. Cove Lick compressing station, Fink compressing station—Those are the only two stations located directly on that line. Of course, the various other stations scattered through the field are connected in such a manner that the gas can be diverted in different directions, so as to reach the particular point on the system of pipe lines where it is most needed.

Q. Is there a compressing station at Cedarville?

A. There is not. That gas is delivered into our lines by the United Fuel Gas Company, at a pressure sufficient to enable it to feed against the pressure on our lines.

Q. Does the United Fuel have a compressor station at that point for the delivery?

A. No; I do not understand that they have a compressor
539 station at that point; I do understand that they have a compressing station farther down in their field, which pumps the gas through that line to the point where it is connected to our line.

Q. Then it is rather a measuring station, instead of a compressor station?

A. There is a measuring station located at that point at Cedarville, through which the gas is measured that comes into our lines.

Q. The gas that you take from the United Fuel is then commingled with your own production and the gas purchased along the route, as taken into the measuring stations?

A. It is.

Q. Is the Reserve Gas Company furnishing any gas to Parkersville?

A. No, sir, not at this time, and has not at any time, except during cold weather last winter. The Hope Natural Gas Company had one well in the field which was not connected to its pipe line system, but was located in close proximity to one of the lines of the Reserve Gas Company, and I made arrangements with the management of the Reserve Gas Company to sell the gas from that well to them, and to take a like amount out of their line at a point where it crossed the lines of the Hope Natural Gas Company leading to Parkers-
540 burg, on those days during the winter when that gas was needed in Parkersburg.

Q. Was that point of connection Schultz Station?

A. Pardon me?

Q. Was that point of connection between the two companies Schultz Station?

A. It was not. That point of connection was at Boaz, south of Williamstown, along the Ohio River.

Q. Is there a connection between the two companies then at Boaz—the Hope and the Reserve?

A. I believe that that connection is still there, although no gas is being used through it now.

Q. Is that the only point of connection now or heretofore between those two companies?

A. No.

Q. Where are they connected?

A. There are connections between the two companies out in the field. While I do not know just exactly where those connections are, my belief is—my understanding is that they are in Doddridge County, West Virginia. The Reserve Gas Company has sold gas to the Ohio Company in that section—or sold gas to the Hope Natural Gas Company in that section.

Q. Is the Hope Gas Line system connected with the lines
541 of any other company, excepting the Manufacturers Light & Heat Company that has been testified about, and also excepting the Reserve which you have just referred to?

Mr. Weil: Do you mean in the State of West Virginia or anywhere?

Mr. Steptoe: I mean in the State of West Virginia.

A. There is connection, as I stated, between the lines of the United Fuel Gas Company and the Hope Natural Gas Company at Cedarville, in Gilmer County, West Virginia. There is connection between the lines of the Hope Natural Gas Company and the—My recollection is that the name of the company is the West Virginia Light & Power Company, but in any event it is the company that supplies gas to Burnsville and Sutton and Gassaway, West Virginia. There is connection between the lines of the Hope Natural Gas Company and the Clarksburg Light & Heat Company, in Harrison County, West Virginia.

Q. Did you give a full list of all of the local companies in West Virginia, to which the Hope was furnishing a supply of gas?

A. I think that I did, although I stated, I believe, that
542 there might be one or two companies that we supplied small quantities of gas to. I would be unable to state that definitely without making an examination of the books and contracts.

Q. Well, let me take some, then, separately: Does not your company sell to the Rural Gas Company?

A. (Referring to statement:) I find no record of sales going to the Rural Gas Company in West Virginia.

Q. How about the Jennings Oil Company?

A. The Jennings Oil Company is one of our customers in West Virginia.

Q. What consumers or territory does it furnish?

A. I do not understand that the Jennings Oil Company furnishes

any gas to consumers in West Virginia, although it may be possible that they do supply a small portion of gas to certain consumers located in the fields in which they are operating for oil. The gas which the Hope Natural Gas Company sells to them is sold for their own use in the operations of their business in West Virginia.

Q. Is that the same situation with reference to the Marion Oil Company,—or do you furnish them?

A. We sell a small quantity of gas to the Marion Oil Company, and the situation is about the same as with the Jennings Oil Company, although I do understand that the Marion Oil Com-
543 pany furnishes some few consumers with gas.

Q. Where is that?

A. I believe that their property is located in Monongalia County, West Virginia; that is my recollection.

Q. How about Keener's Oil, Natural Gas & Fuel Company?

A. I do not find any record of sales of gas to the Keener Natural Gas & Oil Company in our statement of March, 1920.

Q. Do you recall that the Hope Company has furnished the Keener Company in past years?

A. I do.

Q. And where does the Keener Company furnish consumers—what communities?

A. Weston, Lewis County, West Virginia, and possibly some smaller outside boroughs; I am not informed as to that.

Q. Does the Hope Company sell and deliver gas to the Comet Oil and Gas Company?

A. We do sell some gas to the Comet Oil and Gas Company.

Q. Where does it operate, and what communities does it furnish?

A. I believe that the connections on our lines are made in Harrison County, West Virginia. I do not think, however, that the Comet Oil and Gas Company supplies any large number of consumers. They may supply a small number of consumers,
544 but it is my understanding that the gas which they produce, and also which they purchase, is being used for the operation of the glass plants of the Hazel-Atlas Glass Company, of which the Comet Oil Company is the gas producing part of the company. That is the understanding that I have; whether it is correct or not, I am unable to say.

Q. Now, how about sales to the Monongahela Valley Traction Company, and what community does it serve?

A. I know that we have the name of the Monongahela Valley Traction Company on our statement of March, 1920, but they were taking no gas. The connection between these companies, as I understand it, was made as a precautionary measure, so that in case anything happened to the lines of the Monongahela Valley Traction Company, that they could take gas from the Hope Natural Gas Company; or, on the other hand, if anything happened to the lines of the Hope Natural Gas Company that they could take gas from the Monongahela Valley Traction Company, but, unless in emergency cases, this gas was not to be used by either company.

Q. What community does that company furnish?

A. The Monongahela Valley Traction Company, I believe, supplies gas to Fairmont, West Virginia, and possibly some town surrounding Fairmont.

Adjourned until Friday, June 11, 1920, at 10 o'clock, a. m.

545 Friday, June 11, 1920.

And now, Friday, June 11, 1920, the hour of 10 o'clock a. m. having arrived, hearing resumed pursuant to adjournment.

T. O. SULLIVAN recalled.

Cross-examination (resumed).

Mr. Steptoe:

Q. On yesterday, Mr. Sullivan, you were unable to give me the amounts sold annually since the year 1910 to the Peoples Natural Gas Company and other purchasers from the Hope Company. Have you that data now?

A. I have.

Q. Please give us your figures.

A. Commencing with the year 1910, and during each year thereafter, the Hope Natural Gas Company sold and delivered:

To the Fayette County Gas Company, 1,854,874,000 cubic feet of gas, in the year 1910. In 1911, 1,890,911,000 cubic feet. In 1912, 2,098,327,000 cubic feet. In 1913, 1,986,753,000 cubic feet. In 1914, 1,765,177,000 cubic feet. In 1915, 1,766,014,000 cubic feet. In 1916, 2,007,087,000 cubic feet. In 1917, 1,976,034,000 cubic feet. In 1918, 1,386,413,000 cubic feet. In 1919, 1,597,-

546 130,000 cubic feet.

During the same period, the Hope Natural Gas Company sold and delivered to the East Ohio Natural Gas Company:

In the year 1910, 26,381,236,000 cubic feet. In 1911, 27,784,-565,000 cubic feet. In 1912, 31,242,971,000 cubic feet. In 1913, 32,622,919,000 cubic feet. In 1914, 25,688,561,000 cubic feet. In 1915, 20,177,370,000 cubic feet. In 1916, 45,027,900,000 cubic feet. In 1917, 44,036,867,000 cubic feet. In 1918, 36,069,354,000 cubic feet. In 1919, 32,349,750,000 cubic feet.

During the same period, the Hope Natural Gas Company sold and delivered to the Peoples Natural Gas Company, commencing with the year 1910:

In 1910, 20,427,446,000 cubic feet. In 1911, 19,855,811,000 cubic feet. In 1912, 23,303,041,000 cubic feet. In 1913, 20,176,-604,000 cubic feet. In 1914, 17,919,695,000 cubic feet. In 1915, 21,597,627,000 cubic feet. In 1916, 26,251,185,000 cubic feet. In 1917, 23,276,116,000 cubic feet. In 1918, 18,209,928,000 cubic feet. In 1919, 6,496,994,000 cubic feet.

You will note that the quantity of gas delivered to the Peoples

Natural Gas Company during the year 1919, was very much
547 less than the quantity delivered in former years. This was caused by the fact that a very considerable pool of gas was discovered near McKeesport, in Allegheny County, Pennsylvania, during the summer of 1919. The Peoples Natural Gas Company purchased a very large portion of this gas, and therefore their requirements from the Hope Company were reduced in proportion. That field is now producing a comparatively small quantity of gas, and it cannot be presumed that next winter they will obtain anywhere near the quantity of gas from that field that they did obtain during the past winter. I call attention to that simply on account of the fact that the Peoples' requirements were very much less in 1919 than in previous years, or than we expect that they will be in the years to come.

During the same period, the Hope Natural Gas Company sold and delivered to the Manufacturers' Light and Heat Company, commencing with the year 1910:

In 1910, 9,405,015,000 cubic feet. In 1911, 10,006,907,000 cubic feet. In 1912, 9,026,131,000 cubic feet. In 1913, 9,271,288,000 cubic feet. In 1914, 9,282,353,000 cubic feet. In 1915, 9,445,951,000 cubic feet. In 1916, 14,238,191,000 cubic feet. In 1917, 14,687,008,000 cubic feet. In 1918, 12,086,331,000 cubic feet. In 1919, 12,268,302,000 cubic feet.

548 During the same period, the Hope Natural Gas Company sold and delivered to the River Gas Company, commencing with the year 1910:

In 1910, 1,049,015,000 cubic feet. In 1911, 1,197,537,000 cubic feet. In 1912, 1,368,036,000 cubic feet. In 1913, 1,133,827,000 cubic feet. In 1914, 1,348,795,000 cubic feet. In 1915, 1,454,506,000 cubic feet. In 1916, 1,354,270,000 cubic feet. In 1917, 1,419,252,000 cubic feet. In 1918, 1,362,193,000 cubic feet. In 1919, 1,220,815,000 cubic feet.

During the same period, the Hope Natural Gas Company sold and delivered to the Northwestern Ohio Natural Gas Company, commencing with the year 1910:

In 1910, 3,673,685,000 cubic feet. In 1911, 3,814,692,000 cubic feet. In 1912, 4,285,096,000 cubic feet. In 1913, 4,704,660,000 cubic feet. In 1914, 5,213,506,000 cubic feet. In 1915, 5,196,789,000 cubic feet. In 1916, 5,296,766,000 cubic feet. In 1917, 6,347,845,000 cubic feet. In 1918, 6,059,661,000 cubic feet. In 1919, 5,709,498,000 cubic feet.

On yesterday I stated that I was unable to say definitely
549 whether or not the sales of gas to consumers in the field and the gas used for the compressing stations of the Hope Natural Gas Company in West Virginia, was included under the heading, "Gas sold to industrial consumers," during each year, commencing with 1910, and continuing to 1919. I have investigated this, and I find that those sales were included in the figures which I gave yesterday.

Q. What is the gas used for field service? What purpose is it furnished for?

A. That is gas sold to consumers for drilling wells and operating machinery through the fields for the production of oil and gas.

Q. Does it include the gas consumed by the Hope Company in its own operations?

A. It does.

Q. Well, then, as I understand you, it is what gas is furnished by your company, not only for your own drilling, but sales made to other producers and operators for drilling purposes?

A. That is the fact.

Q. Can you give us the amount furnished by the Hope Company during the year 1919, for such field service, included, as you say, in the industrial amounts rendered by you on yesterday?

550 A. We may be able to ascertain that from our records. However, I consider it doubtful, for the reason that that gas—contracts are made for the sale of that gas, and it is sold the same as if it was sold to any other consumer for any other industrial purpose.

Q. Do you keep a record of what your own company consumes for that purpose?

A. We do. We make contracts with ourselves the same as we do with other consumers.

Q. I wish you would investigate at our next recess, and advise us as to the amounts, if they can be furnished, and if not, the best approximation or percentage, of industrial consumption that you can make?

A. Yes, sir.

Q. The common form of oil and gas lease in West Virginia requires the furnishing of free gas to the farmer or lessor, does it not?

A. Usually it does.

Q. Is there much of that gas supplied by your Hope Company to its lessors?

A. There is a very large quantity.

Q. That, and the royalty per well, and the delay rental, prior to operations, constitute the consideration paid to the farmer for the lease, as a rule?

551 A. The consideration paid to the farmer for the lease consists of the free gas which is furnished, the rental per acre paid to the farmer, the royalty for the well when it is drilled and gas found in paying quantities, and the bonus, if any, which is paid at the time that the lease is taken.

Q. In the figures which you gave us yesterday for domestic consumption furnished in West Virginia by the Hope Company, did you include the free gas furnished to farmers?

A. I did not.

Q. That is not shown in the figures you gave yesterday under any heading?

A. It is not.

Q. Of the amounts supplied annually by your company at the state line to the Peoples Natural Gas Company, is there any part of that gas used or furnished by the Peoples Company in Pennsylvania, for industrial purposes?

A. Our contract with the Peoples Natural Gas Company only covers a supply of gas for domestic purposes; but in years past, when the Hope Natural Gas Company has had surplus gas, it has supplied gas—has sold gas to the Peoples Natural Gas Company, which, I have every reason to believe, was sold by them for industrial purposes.

Q. Does the Peoples Natural Gas Company have gas terri-
552 tory and production of its own in the state of Pennsylvania?

A. They do.

Q. Does it purchase gas from other producers in that state?

A. It does.

Q. Through what system is this gas produced and purchased by the Peoples Company in Pennsylvania, supplied to its customers?

A. Through their regular pipe line system.

Q. Is that the same system into which the purchases from the Hope Company at the state line are fed?

A. It is.

Q. Are the purchases and production of the Peoples Company in Pennsylvania fed into that system along the routes of the pipe lines in substantially the same way in which the Hope Company acquires or gathers up its production and purchases in West Virginia?

A. It is substantially in the same manner.

Q. That is, all along the route?

A. More or less. There are certain sections where there is no gas being produced; where it is not being produced. In those sections, of course, there would be no gas feeding into the line.

Q. Does the Peoples Company furnish its consumers directly or through the medium of distributing companies, in the
553 City of Pittsburgh and other cities and communities?

A. I understand that the Peoples Company furnishes the majority of its consumers directly. I believe it has one or two contracts for the supply of gas to other distributing companies.

Q. Where are those other distributing companies?

A. I understand that one of them is dupplying gas in Johnstown, Pennsylvania. That is the only one that I know of.

Q. Is that true in the town of Altoona also?

A. No, sir; it is my understanding that the Peoples Company is furnishing consumers direct in the town of Altoona.

Q. What is the name of the distributing company furnishing Johnstown?

A. I believe the name of that company is the Johnstown Fuel Company, although I am not positive as to the name of the company.

Q. Is this method of producing and supplying its consumers used by the Peoples Company presently, the same method that has been used for some years past?—That is, of gathering up its production, and purchasing from other producers in Pennsylvania, and supplying the same to its consumers through the same system?

A. It is, to the best of my knowledge.

Q. Do you know how much of its supply of gas is fur-
554 nished by the Peoples Company directly or through its distributing companies in Pennsylvania for industrial use?

A. I do not.

Q. You do know that it furnishes a large number of industrial consumers?

A. I know that it furnishes gas to several industrial consumers.

Q. How long has it been furnishing gas for industrial use in Pennsylvania?

A. To my knowledge, since 1903.

Q. Do you know whether the East Ohio Gas Company has any production of its own?

A. I am informed that they have.

Q. Where is that territory located?

A. In the vicinity of Cleveland, Ohio; some of it very close to the city, and some some little distance—some distance away from the city.

Q. Does the East Ohio Gas Company purchase gas of any producer other than the Hope Company?

A. My information is that they do.

Q. Who is that producer, and where is that gas produced?

A. The information I have is, that the East Ohio Natural Gas Company purchases gas from a number of individual producers who have territory in close proximity to the City of Cleveland,

555 Ohio.

Q. Are those purchases fed into the same system through which the gas purchased from the Hope Company is delivered?

A. My information is that it is.

Q. Does the East Ohio Gas Company furnish its consumers directly or through other distributing companies?

A. The bulk of their consumers is furnished directly by them. They may have some contracts, some few contracts, with other small distributing companies. I am unable to state that definitely—whether they have or not.

Q. You do not know where those distributing companies are located, or what communities they serve?

A. I do not, if there are any.

Q. Does the Fayette County Gas Company have territory and production of its own?

A. I understand that they have.

Q. And does it purchase from other sources than the Hope Company?

A. I am unable to say whether they do or not. I don't know.

Q. Where is its own territory and production?

A. It is located in the vicinity of Connellsville and Uniontown, Pennsylvania.

556 Q. Is that production fed into the same transmission lines and distributing system through which the purchase from the Hope is furnished or supplied?

A. I understand that it is.

Q. Does the Fayette County Gas Company furnish any gas for industrial use in Pennsylvania?

A. I understand they do.

Q. How long has that been going on?

A. Well, I am unable to state that. To the best of my knowledge,

they have been furnishing gas to industrial consumers at least since 1910, and I believe prior thereto, although I am not informed on that subject.

Q. What about the River Gas Company, as to production of its own?

A. They have production of their own.

Q. Where is that located?

A. In the vicinity of Marietta, Ohio.

Q. Have you any idea as to the amount of its own production in Ohio?

A. I have not, other than that it is my impression that it is not very large.

Q. About what proportion of its entire supply?

A. I would be unable to answer that question.

Q. Does the River Gas Company purchase from any com-
557 pany other than the Hope Company?

A. I understand that they purchase gas from local producers.

Q. In what state?

A. In Ohio.

Q. I suppose, like the other companies, that production of its own and those purchases in Ohio are fed into the same system and distributed through the same system of the River Gas Company that the purchases from the Hope Company are fed?

A. The information I have is that it is.

Q. What about the supplying of industrial consumers by the River Gas Company, now and in prior years?

A. I understand that they supply industrial consumers when they have surplus gas for that purpose.

Q. You don't know, as to any of these companies, the proportion or the amounts used for industrial purposes, do you?

A. I do not.

Q. Now, with reference to the Northwestern Ohio Natural Gas Company: does it have territory and production of its own?

A. I believe it does, although I am not informed as to that.

Q. If it has any such territory and production, what is your idea as to where that is located?

A. My idea would be that it would be located in the vicinity
558 of Toledo, Ohio.

Q. You know of no territory or production by it in the State of West Virginia?

A. I do not.

Q. Do you know whether that company purchases from any other producers than the Hope Company?

A. I do not.

Q. Do you know whether it supplies any of its gas for industrial purposes now, or has supplied any in prior years?

A. I do not know definitely. It is my impression that they do not supply gas for industrial purposes now. They may have done so in former years.

Q. Does it supply gas directly or through distributing companies?

A. I understand that it supplies gas directly. It may also supply gas to other distributing companies. I don't know.

Q. Can you tell us where the territory and production of the Peoples Natural Gas Company of Pennsylvania, is located? In what counties?

A. I know they have leases in Clarion County, Pennsylvania—leases and wells in Clarion County; Westmoreland County, Pennsylvania; Allegheny County, Pennsylvania; Westmoreland County, Pennsylvania, and I believe some in Washington County,
559 Pennsylvania. And they may have some leases and wells in other counties with which I am not familiar.

Q. It has had that territory and production for a number of years past?

A. It has.

Q. Can you tell us approximately the acreage, the number of wells or amount of production, of the Peoples Natural Gas Company of Pennsylvania?

A. I cannot.

Q. You have considerable familiarity with the territory and operations of the Manufacturers Light and Heat Company, have you not?

A. I did have for eight years prior to July 1, 1918. Since that time I have not; I am not familiar with it since that time.

Q. That company had, and for years prior to your severing your connection with it, had very considerable territory and production in Pennsylvania?

A. It did.

Q. Either of its own, or through its various subsidiaries?

A. It did. It also purchased gas from other producers in the state of Pennsylvania.

Q. Was that gas purchased and produced by it in Pennsyl-
560 vania fed into the same general distributing system into which the gas derived from West Virginia by purchase from the Hope Company and otherwise was fed?

A. It was.

Q. All of that gas was commingled, and furnished generally throughout the system?

A. It was.

Q. Now, with reference to the service of consumers of the Hope Company in West Virginia, how are the domestic consumers furnished or supplied, that is, from the transmission lines or from the suction lines?

A. The lines leading to the towns in which the Hope Natural Gas Company are supplying gas to consumers are connected on the discharge lines of the company, in most instances. There are some instances where they are connected on the intermediate or suction lines.

Q. From what lines do you supply the industrial consumers which you furnish direct? And by industrial consumers I do not mean field service or compressor stations.

A. Those are furnished from the same lines that transport the

gas from the fields to the domestic consumers to the various towns in which those industries are located.

Q. That is, the discharge or transmission lines?

A. That is from the transmission lines. In order to make
561 that clear, I had better explain, perhaps, that the domestic consumers are always furnished through a low pressure system which is installed at the end of the transmission lines. It frequently occurs that the industrial consumers are connected directly to these transmission lines, with a system of independent regulators, which controls the supply of the industrial consumers.

Q. Is that about the same way in which the Manufacturers Light & Heat Company supplied its domestic and industrial consumers while you were connected with that company?

A. It is. The systems of all gas companies in that respect are constructed very much alike.

Q. Are your pipe lines laid over lands owned by the Hope Company?

A. The pipe lines are laid over lands to which rights of way have been secured by the Hope Company. It is not a vested ownership, as I understand it.

Mr. Weil:

Q. A what?

A. It is not a vested ownership.

Mr. Steptoe:

Q. By that you mean that the fee simple ownership or
562 entire ownership of the land is not owned by your company, but simply a right of way?

A. A right of way, for the purpose of laying, maintaining and operating a pipe line.

Q. And telephone lines along with the pipe line, as a rule?

A. That is frequently the case.

Q. And also telegraph lines, over the same right of way?

A. In some instances we have obtained rights of way for telegraph lines or telephone lines. We generally, as a rule, have both over the same right of way.

Q. How are those rights of way acquired?

A. The right to lay pipe lines is usually secured from the owner of the property by agreement, for which a certain sum of money — to the owner.

Q. In case of inability to deal with the farmer, how are they acquired?

A. In some instances by condemnation proceedings.

Q. A considerable portion of your lines cross over the public highways of the State of West Virginia, do they not?

A. There are many places where our lines cross the public highways.

Q. And a considerable portion of the gathering lines not only cross, but are sometimes laid along the highways, are they not?

563 A. That is sometimes the case, but I do not think that there is a considerable portion of them laid along the highways. Where this is done, however, where they are laid along the highways, it is customary to secure a right of way from the farmer, if it can be obtained, the same as though it crossed through the property.

Q. Do you secure permits or franchises from the proper officials for the use of the roads in crossing or running along in and upon them?

A. I believe that is usually done.

Q. Now, as a matter of fact, Mr. Sullivan, the Hope Company holds one or more franchises from the County Court of Harrison County, for the use of all of the public roads in that county for laying pipe lines, does it not?

A. It is my understanding that the Hope Natural Gas Company has certain permits from some of the county courts in West Virginia. I would be unable to say whether it was Harrison County or not—for granting them the privilege of laying pipe lines along certain highways. I only have that from hearsay, as I never examined the records to ascertain just what those permits covered.

Q. The records of your company should disclose those facts, if they are correct.

A. I presume that they would.

563½ Q. Now, doesn't that same condition maintain in other counties?

A. It may. I am unable to say.

Q. In the towns or communities which the Hope Natural Gas Company furnishes directly, it has permits, has it not, for the use of the streets and roads?

A. I presume that it has, although I have never seen those franchises or permits, except in, I think, one instance. I have only had occasion to look up one of those.

Q. In incorporated towns, that permit must be had from the town officials, must it not?

A. That is my understanding.

Q. And where they are unincorporated, you get your permits from the County Courts of the Counties; is that correct?

A. No, not entirely. I believe in some of the unincorporated towns we have secured the permission of the owners of the property, who wanted the lines to supply them with gas. In fact, in some instances, that has been done by petitions, which have been sent into the company by different owners of property along the line through the different localities, where they desired to have gas, requesting the company to instal those lines and to furnish them gas.

564 Q. To take a specific example, the Hope Natural Gas Company has and holds a franchise from the City of Parkersburg, for the use of its streets for the laying of pipe lines and other purposes of its distributing system, telephone and telegraph lines, has it not?

A. It has a franchise in the City of Parkersburg for its pipe lines, for the purpose of distributing and supplying natural gas to consumers in the city. I do not think that that includes right of way for telephone and telegraph lines, although I am not able to state that positively without making an examination of the franchise.

Q. Well, you do know that it has telephone and telegraph lines in the city to its offices?

A. It has a telephone and telegraph line to its office in the City of Parkersburg, but how it gets there I am unable to say. It may go in over the lines of another company, for all I know.

Q. Going to the matter of compressor stations, of course those vary in cost acording to size and capacity, but in order that we unlettered and inexperienced people may have some idea on the subject, could you tell us the approximate cost of a modern compressor plant?

A. The cost of compressing stations varies on account of the size of the station, its location, with reference to its inability
565 to have material delivered on the ground—that is, whether or not it is located close to railroad points or whether the material has to be hauled or transported a long distance by trucks; and it is almost impossible to make any definite estimate that would cover the cost of a compressing station, without knowing all of the details in connection with it. However, speaking generally, we estimate at the present time that the cost of a compressing station would run from $125 to $150 per horsepower, depending on the amount of horsepower that was installed, as to what the total cost might be.

Mr. Weil:

Q. A 5,000 horsepower then would be how much?

A. Using the figures of $150 per horsepower, a station having 5,000 horsepower would cost then approximately $750,000.

Mr. Steptoe:

Q. What is the average horsepower of the thirty-five or more compressor stations owned by your company?

A. I would be unable to say what the average horsepower, divided up equally among all those stations, is.

Q. Suppose you give us——

566 A. Every station that is installed is built for a specific purpose, with a view to handling whatever quantity of gas may be produced in the field which the station is presumed to operate upon. Now, in some instances small stations are installed, of possibly 150, 200 or 300 horsepower. In other instances, very immense large stations are installed, but that all depends——

Mr. Weil:

Q. Well, give us the maximum. You say large stations are installed—How many horsepower?

A. The largest station the Hope Company has, contains about

17,150 horsepower. I am giving those figures from memory, but I think that I am fairly accurate in that statement. However, some of the other stations do not contain as much horsepower.

Mr. Steptoe:

Q. They will run, in horsepower, between the maximum you have just mentioned and what minimum?

A. About 200 horsepower, approximately; run from 200 horsepower to 17,150, on the system of the Hope Natural Gas Company. Those are approximate figures.

Q. While you are upon this subject of your largest com-
567 pressor station,—which I understand to be the Hastings Station—can you tell us the cost of its construction?

A. I cannot, without reference to the books.

Q. It will run up into the many millions, will it not?

A. It will run up into millions, yes, sir.

Q. Now, you spoke of the necessity of compressor stations in present day operations. How long have these compressor stations been necessary in order to properly conduct the business of your company?

A. My recollection is that the Hope Natural Gas Company commenced installing compressor stations about 1903 or 1904, and have been adding to them since that time, as the occasions arose for them. I wish to correct my testimony in regard to the horsepower at Hastings Station. Now that I think it over, I believe there is another turbine engine at that station, which I did not include in my calculations when I stated that the horsepower was 17,150 horsepower. I would like to ascertain the horsepower of that turbine engine and correct those figures accordingly, later.

Q. Other compressor stations from time to time then are contemplated by your company?

A. They are, as the occasions make them necessary.

Q. Are these compressor stations necessitated solely because of forwarding the gas? Is that the only occasion for installing
568 them?

A. The only occasion for installing a compressing station is when the actual pressure in the field gets so low that it will no longer cause the gas to flow through the lines to market, and these compressing stations are installed for the purpose of taking the remaining gas that is left in the field, in the sands, out of the sands and transporting it to market. Increasing the compression by the use of compressing stations causes the gas to flow through the lines to the markets.

Q. By my question I meant to develop this feature, Mr. Sullivan: the territory of the Hope Natural Gas Company is not located in any solid block, is it?

A. It is not.

Q. It is scattered through various counties and various sections of the gas producing field?

A. It is.

Q. And in those same fields or sections other companies, especially the larger ones you have referred to, as well as smaller operators and producers, are engaged in producing and selling or marketing gas.

A. They are.

Q. Now, if any one of those other companies in the same field installs a compressor station, I mean to ask you if it is not necessary, as a matter of self protection, for your company to do likewise?

569

A. In one sense it would be. However, none of these gas producing companies are very anxious to spend large sums of money in installing compressing stations until it is necessary to do so in order to get the gas. If the natural rock pressure in the field is sufficient to force the gas to market, it would be bad business to spend money to provide an artificial means of doing the same thing.

Q. Yet if any one company installs a compressor station, can it not, and does it not, get a larger share of the gas than the companies which do not have compressor stations?

A. It might get a larger share of the gas. That would depend very largely on the location of its wells and territory, with reference to the wells and territory of the other companies.

Q. And if the wells of that company are on farms surrounded—or in the same immediate vicinity as your wells, it would have the advantage over the Hope Company?

A. It would be reasonable to presume that it would.

Q. And in such case then, your company would go and do likewise, would it not?

A. We would consider the matter of going and doing likewise, and if conditions seemed to warrant it, it is likely that we would.

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Q. Can you tell me what is the present average rock pressure of the wells of the Hope Natural Gas Company?

A. I can give you the average rock pressure of the wells owned by the Hope Company, as determined by the pressures taken, I believe, in the month of September, 1919, of a number of wells scattered through different fields which were shut in for some considerable time, so that we might obtain the rock pressure of those wells as nearly as it could be obtained. There are always, in all fields, some wells that are kept practically continuously in use, and it is impossible to ascertain the rock pressure of those wells, without shutting them in long enough to permit the pressure to accumulate in the well.

Q. Well, as a matter of fact, that is the way of your company for ascertaining and determining that rock pressure, that average rock pressure?

A. It is.

Q. What is that average rock pressure?

A. I have here the pressures taken on twenty-three wells during the month of September, 1919; these wells being located in Monongalia and Wetzel Counties, West Virginia. The average rock pressure of the twenty-three wells being 174 pounds. I have also the pressures of twenty-eight wells located in Doddridge

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County, West Virginia, pressures taken at approximately the same period; the average rock pressure of which is 111 pounds. I have also the pressures of twenty-nine wells, located in northern Wetzel County and southern Marshall County, West Virginia; pressure taken in 1919, the average rock pressure of which is

68 pounds. I have also the pressures of twenty-four wells, located in Wetzel and Tyler Counties, pressures taken at approximately the same period, the average rock pressure of which is 84 pounds. The average rock pressure of the total number of wells, 104 in all, is 107 pounds.

Q. My question sought to elicit the average rock pressure of all your wells.

A. It is impossible to give that, or for any company that is using its wells to do so. All it can give is the information it can get.

Q. What you have given us is the most you can give, for the year 1919?

A. No; I could ascertain the pressures in some other portions of the field. These are figures which I had compiled a short time ago for my own information, but I could add to them if it is necessary.

Q. Without going into further investigations of your records on the subject, could you approximate the rock pressure in that
572 section of your territory located in Marion, Harrison and Lewis Counties?

A. The general information which I have regarding those counties, leads me to believe that the average rock pressure of the wells in those counties would be less than 100 pounds.

Q. Now, then, as you proceed further south, does the average rock pressure get any higher?

A. It does, somewhat.

Q. Would it be correct to say that the earlier development, and the greatest development heretofore, has been in the northern section of West Virginia, and that the development has, in a general way, proceeded southerly?

A. That would be correct.

Q. And that the rock pressures of the earlier developed sections would, as a rule, be lower than in the later developed sections?

A. That would be correct, where gas is found in the same sands.

Q. Prior to the installation and general use of compressors, did the larger companies figure out and estimate the distances over which gas could be delivered under varying rock pressures or natural pressures?

A. That was undoubtedly very fully considered.

Q. And you have a general idea about the distance over which gas could be transported through varying sized pipe lines on
573 varying natural pressures?

A. I have.

Q. Of course, a great many elements enter into the matter, but can you not give us an approximation of the distance which gas could be transported through, say a 10-inch line, with a natural rock pressure at the beginning point of 100 pounds?

A. Mr. Steptoe, in order to answer that question, I think you will have to go a little further, and give me the pressure at the outlet—that you wish to maintain at the outlet end of the line.

Q. Let us say that the outlet pressure is such pressure as would be ordinarily necessary to enable the distributing company to furnish it to its consumers?

A. To get that now in shape so that it can be answered, it would

be better to assume a certain fixed pressure at the inlet to the lines, and also a fixed pressure at the outlet, and then the distance that you wish to transport it; and then it is easy to determine the quantity of gas that a line of that size and those pressures maintained will transport over a given period.

Q. Well, let me ask you what is the ordinary pressure at which gas is taken by a distributing company furnishing a community of say 25,000 inhabitants?

574–576 A. That depends very largely on the construction of the distributing plant. A pressure ordinarily of from 10 to 25 pounds, maintained at the distributing end, would supply a distributing plant; the 10 pounds being maintained in the summer season, when the delivery was comparatively light, and the higher pressures in the winter, when deliveries were grater.

Q. Now, can you give your answer on that basis of intake pressure by the distributing company?

A. I can figure that out. Perhaps I had better get that for you just after the noon recess. Assuming what length of line?

Q. You may assume the line as long as you please. I want to get the distance to which gas delivered at the natural pressure at the wells, of 100 pounds, at a given point, would be transported through a 10-inch line.

Mr. Weil: This cross-examination is objected to, in the first place, as not being cross-examination on anything developed in the examination in chief. Secondly, as asking the witness for an opinion and a calculation upon a state of facts incomplete and without providing the necessary data and information upon which a calculation can be made. Thirdly, the question of transportation of gas with an
577 initial pressure assumed in the question, of 100 pounds, to some distributing line at some point, involves the question of the quantity of gas desired at that particular point; it being a matter of physics and ordinary mathematics, that gas into a line at the point of inception, with a pressure of 100 pounds, will pass through that line in certain quantities, in varying distances, from 10 miles to perhaps a thousand, depending upon the quantity that is expected from the outlet; and therefore the whole cross-examination affords no information to the Court, or any inquiring body, as to anything involved in this controversy, and it has already taken a large amount of time, and is therefore objected to.

The Commissioner: Let the objection be noted and let the witness answer.

A. In order to answer the question, I will have to have more data than you are giving me.

Mr. Steptoe:

578 Q. Would it enable you to answer the question, to put that 10-inch line at a length of 100 miles, and then again at 50 miles, and then again at 25 miles? And if you can, on the

facts assumed, so answer, I would still like to know for what distance any gas delivered under the assumed facts, would be transported.

A. If you will put your question in this way: Fix the initial pressure and the outlet pressure, and the length of the line, I can then tell you the quantity of gas that could be delivered through a line of that length in a given period of time, if those pressures were constantly maintained. I cannot tell you the distance that some gas would flow through a line of great length. It would be presumed that any gas that is put into the line at one end would eventually come out at the other end, until the friction in the pipe had increased to such an extent that the pressure on the outlet end was equal to the air pressure or atmospheric pressure, and when it reached that point, the atmospheric pressure would prevent any gas from coming out of the line at the outlet end.

Q. Very well, I will state the question according to your suggestion. Assume an initial pressure of 100 pounds, constantly maintained; assume an outlet pressure of 25 pounds, which I un-

579 derstand you to say would be a fair pressure, at which to deliver to a distributing company such as was mentioned; and assume the length of the 10-inch line at 100 miles, and then again at 50 miles, and then again at 25 miles; and give me your estimate of the quantity of gas which could be transported and delivered in the period of 24 hours.

A. A 10-inch line, 100 miles in length, with 100 pounds inlet pressure, maintained constantly, maintaining 25 pounds at the outlet end, will deliver in twenty-four hours 3,144,000 cubic feet of gas.

Mr. Weil:

Q. Through a line of what length was that?

A. 100 miles. The same line 50 miles in length, with the same pressures being maintained—that is, 100 pounds at the inlet and 25 pounds at the outlet—will deliver 5,760,000 cubic feet of gas.

Q. In twenty-four hours?

A. In twenty-four hours. The same line 25 miles in length, with the same pressures being maintained—that is, 100 pounds at the inlet end, and 25 pounds at the outlet end—will deliver 8,640,000 cubic feet of gas in twenty-four hours.

580 Mr. Steptoe:

Q. The figures you have given are illustrative of calculations made which could be extended to various size lines and various pressures and various distances?

A. It could.

Q. I believe you stated that the system of the Hope Company was one complete system?—not separate units separately operated?

A. It is.

Q. It is operated as a whole?

A. It is.

Q. So that the gas received into the system can be, if desired, diverted to any given point or any given transmission line?

A. It can be diverted into any transmission line. It can be diverted into any of the transmission lines connected with the general system throughout the field. After the gas passes through compressing stations, it then enters the lines leading to certain cities or towns, and cannot be diverted, the way the lines are connected, after that occurs.

Here a recess was taken until 1:30 P. M.

581 Friday Afternoon, June 11, 1920.

And now, the hour of 1:30 o'clock P. M. having arrived, hearing resumed pursuant to adjournment.

T. O. SULLIVAN resumes the stand.

Cross-examination (continued).

By Mr. Steptoe:

Q. Let me direct your attention to the map filed as Pennsylvania Exhibit No. 15; there are at the majority of the compressor stations divergent lines, are there not?

A. I do not understand just what you mean by "divergent lines".

Q. I mean, there are one or more lines leading away from the compressor station?

A. There are, but usually in the same direction away from the station.

Q. For example, beginning in the southerly portion, let us take your Cove Lick Station. Is there not a line leading from that station to the east, around through Weston, and thence northwardly; and another line from Cove Lick Station in the direction of Fink Station?

A. There are such lines connected to the Cove Lick Compressing Station, but the line leading around toward Weston is primarily a suction line, while the line running towards Fink is a dis-
582 charge line from the station. One line is used to take gas into the station, and the other line used to discharge gas from the station, after it passes through the station.

Q. Could the suction line toward Weston be used for a transmission line from Cove Lick Station?

A. If it were to be so used, it would shut off all the wells that are connected to that line.

Q. Take Fink Station, can the gas received into that compressor station be sent through the line leading to the right through Harrison and Marion Counties, or through the line leading off to the left through Doddridge County and on to Hastings Station?

A. That line is also primarily a suction line leading into Fink Station, and while the lines are connected through to a point in Doddridge County, where it connects with the line leading to Hastings Station, and the line to that extent could be used as a dis-

charge line from the station, the gas from that station goes either through the line marked H-5 on the map, or H-45, and both lead to Hastings Station.

Q. The letters "H-45", and so forth, do not appear on the map filed as Pennsylvania Exhibit No. 15, do they?

Mr. Weil: I presume the lines appear, but not the notation.

583 A. The notation "H-45" does not appear on the exhibit, but the line referred to is marked "10-inch".

Mr. Steptoe:

Q. How about Sardis Station in Harrison County; is there more than one transmission line leading from that compressor?

A. There are two transmission lines leading from Sardis Station, a 16-inch and a 10-inch line. One of these is at times used for a suction line to Peora Station, but at other times it is used as a discharge line from Sardis Station.

Q. Is there more than one transmission line from Wright Station?

A. There are two transmission lines from Wright Station to a point in Marion County marked "Morgan". From that point north there is one transmission line connecting with a branch line extending to the east and connecting with a line at Hawkins Station. This branch line is used as a suction line to Hawkins Station.

Q. What is the line leading from Wright Station in a westerly direction towards Hastings—transmission or suction?

A. That is sometimes used as one and sometimes as the other, depending on the way the gas is traveling. If gas from
584 Hastings Station is coming across to Wright Station, then it is used for a suction line,—or, a discharge line from Hastings Station, and is connected to the suction in Wright Station, and vice versa. If it is used as a discharge line from Wright Station, it is then connected into the suction at Hastings.

Q. And you use those lines as transmission lines when you desire?

A. We use any of our lines in whatever way the exigencies of the business may require us to use them. Of course, at certain times, when lines are flowing into a compressing station, it has the effect of shutting out certain wells that are connected to those lines and which are usually feeding into the suction, but, in case of an emergency, we have the lines so connected that we can use them,—some of them, either as a suction or discharge line.

Q. How do you make the change?

A. By opening one gate and closing another.

Q. So that, by closing a gate on that line leading out of Wright Station in a northwardly direction to Marion and Monongalia Counties, you can divert that gas through the line leading westwardly towards Hastings?

A. Yes, that can be done.

585 Q. Now, isn't that situation particularly true at Hastings Station, where a number of transmission lines converge, both feeding in and feeding out?

A. It is not. The lines feeding out of Hastings Station have very few connections from them; they all go to definite points.

Q. Suppose you explain to us what becomes of the gas taken into the Hastings Station.

A. The gas taken into Hastings Station is delivered to the East Ohio Natural Gas Company at the Ohio River.

Q. Through what transmission lines?

A. Through three lines marked on the map—(referring to Pennsylvania Exhibit No. 15)—as crossing the river, the Ohio River, north of Clarington; through two lines shown on the map as crossing the river about two miles south of Moundsville, West Virginia. And a portion of the gas is delivered to the Peoples Natural Gas Company in Pennsylvania, through the line shown on the map as crossing the State line of Pennsylvania in the southwest corner of Greene County, Pennsylvania. At other times, as I just stated, the line shown on the map as extending from Wright Station to Hastings Station is used as a discharge line. Whatever gas is discharged from Hastings Station passes through the Wright Station and is delivered to th Peoples Natural Gas Company at their
586 compressing statio i Brave, in the southern part of Greene County, Pennsylvania.

Q. What about the line running almost due westward from Hastings Station towards Sistersville? Is that a suction or transmission?

A. That is a transmission line and delivers gas to the Hope Natural Gas Company's consumers at Paden City and Sistersville, West Virginia.

Q. Does all of that gas pass through the Hastings Station?

A. It does.

Q. And from there it is fed into the various transmission lines you have last mentioned?

A. Yes, sir.

Q. Is each of those series of transmission lines, or single lines, as the case may be, equipped with gates, as you have mentioned?

A. There are gates on practically all lines.

Q. Can you shut off at Hastings Station, by closing the gates, any one of those transmission lines, if you desire?

A. We can.

Q. And if you chose to do so, you could, by closing all other gates, send all of that gas through the transmission lines leading, for example, to Clarington Station, as far as the lines would take it?

A. It is my belief that we could. It may be that the con-
587 nections are not so arranged so that all the gas going through the lines leading across the Ohio River at Moundsville could be thrown into the other lines crossing the river at Clarington, although I rather think that it can be done.

Q. Well, that is the method by which you regulate whether the gas from the pump station shall go into one transmission line or in another, namely, by shutting the gates?

A. No, sir; those gates are put in there for the purpose of protection more than for the purpose of shutting off the line and throwing the gas through one line or the other. In case of a broken line, or

any repairs being necessary, it is possible to shut the gates and close the gas out of that line temporarily, and deliver as much gas as we can through the other lines while the repairs are being made. Those gates are not installed entirely for the purpose of diverting or changing the flow of the gas.

Q. As a practical operation, however, it is possible for you to control how much shall go through one transmission line or how much through another?

A. I wouldn't like to say that that was the fact as a practical proposition. Those things can be done, but it is not a practical thing to do, unless it is a case of necessity.

Mr. Weil:

588 Q. Mr. Sullivan, in order to save time, let me ask you just at this point: Would it not depend upon the capacity of the lines as to whether or not the gas could be sent through?

A. It certainly does, on the quantity of gas that could be sent through the other lines—or the quantity of gas which could be sent through the other lines would be governed entirely by the capacity of the lines.

Mr. Steptoe:

Q. I am not getting at that proposition, Mr. Sullivan. Under the contracts that the Hope Company has for delivery to the various purchasing companies, some have priority over others, some take larger contracts than others——

Mr. Weil: Larger quantities.

Mr. Steptoe:

Q. —or larger quantities. How do you regulate how much shall be delivered to the one and to the other, and how do you furnish that priority to the one or the other, stipulated for in the contract?

A. Our plant is designed and built specifically for that purpose, and is so arranged—measuring stations installed so as to measure the quantity of gas delivered to each company.

589 Q. All of the gas passing to the East Ohio Gas goes through Hastings Station, does it not?

A. Passing to the east of Ohio County, did you say?

Q. To the East Ohio Gas Company,

A. It does.

Q. Suppose the amount of gas passing through that pump station is sufficient only to supply the contract quantity of the East Ohio Company, what do you do about the transmission line which connects from Hastings Station to the lines of the Peoples Company?

A. In that event we do the best we can to supply the Peoples Company through the line from Wright Station; but, as a matter of fact, in general practice we have been unable to give either one of the companies the amount of gas that they are entitled to take under their contracts.

Q. That does not quite reach my question, Mr. Sullivan.

(Preceding question and answer repeated.)

A. It seems to me that answers your question, Mr. Steptoe.

Q. Under the conditions I have named, do you still use the transmission line connecting from Hastings Station to the Peoples Company, and transmit any gas to the Peoples Company?

590 A. We do; if the quantity of gas passing through the Hastings Station was only sufficient to supply the quantity of gas to which the East Ohio Company is entitled, then we would curtail that quantity to some extent and give the Peoples Gas Company a portion of their supply also. That is, it creates a shortage on the lines of both companies.

Q. Could you shut off the Peoples Company, if you chose so to do, entirely from this supply leading to Hastings Station?

A. Not without violating the terms of our contract with the Peoples Company.

Q. As a physical operating proposition, you could?

A. It can be done.

Q. Are these gates you have spoken about as installed at the various compressor stations open all the time?

A. No, sir; some are open and some are closed, depending on the conditions under which the gas is being used.

Q. Suppose you explain briefly why they are open—or when they are opened and when they are closed?

A. I cannot fix any definite times when those changes are made, as it depends upon the conditions. They are open when it is desired to have the gas go through the lines, and they are closed, or partially closed, when it is desired to shut the gas out of the line, or to curtail the quantity which is going through a certain line.

Q. And some may be open and some closed, according to the exigencies of the business?

591 A. That is practically the condition of all valves. If the demands vary, the plant is regulated so as to meet those demands.

Q. How many gates are there between Hastings Station and Brave Station?

A. That I am unable to tell you. There are several at different points on the line, as it is customary on all lines to instal gates at certain points so, in case of accidents, certain sections of the line can be shut off for repairs, without emptying the entire line.

Q. How many gates are there at Brave Station?

A. I can't tell you.

Q. And what are the gates along the line between Hastings and Brave for?

A. For the purpose that I have just stated—for the purpose of shutting out such certain sections of the lines in case of breaks or wash-outs or interference with the line, necessitating repairs, without emptying the entire line from one into the other.

Q. In your direct examination, you mentioned with some detail the points of delivery to the various purchasing companies. With

the map before you—(Referring to Pennsylvania Exhibit No. 15)—I wish you would tell us the point or points of delivery for the East Ohio Gas Company?

592 A. That is delivered to the East Ohio Company at a point of connection between the lines of the Hope Company and the East Ohio Company, maybe one-half mile north of Clarington, Ohio.

Mr. Weil:

Q. In what state?

A. In Ohio. Gas is also delivered to the East Ohio Company, at a point where the connection between the lines of the Hope Company and the East Ohio Company is made, about three miles south of Moundsville, West Virginia, at a point marked on the map as Round Bottom.

Q. In what state is that?

A. In the State of Ohio. And connections with the lines in both instances are made on the Ohio River.

Mr. Steptoe:

Q. Are those the points of delivery required by the contract between the companies?

A. Substantially they are.

Q. Is it the same point at which deliveries have always been made?

A. The same point.

Q. There has been no change in the point of delivery either

593 near Clarington or at or near Round Bottom, since you have been General Manager of the Hope Company?

A. There has not been any change since that time.

Q. Are you certain of your statement as to that point of delivery near Clarington being in the State of Ohio?

A. I am certain of my statement that that is the information I have.

Q. Where did you get that information?

A. From the other officials of the company, and also from the records of the company, showing that the line across the river belongs to the Hope Natural Gas Company.

Q. You personally, of course, do not know where that state line is, do you?

A. I do not, although I have a pretty good idea where it is, for the reason that I laid or had charge of the laying of those lines across the river at a point south of Moundsville. I laid the first lines that were laid across there for the Hope Company.

Q. What is the boundary line between Ohio and West Virginia?

A. My recollection is that it is at the low water mark on the Ohio side of the river. I am giving that from memory now; I haven't looked it up or tried to verify that recently, but that is my

594 recollection from the time that I worked there, that that is the point that was fixed.

Q. I understand you to say that there has been no change in location since the regime of Mr. Pew as general manager?

A. No, sir. I stated that there has been no change since I have been general manager of the Hope Company. I will say further, however, that as far as my information goes, there were no changes made during Mr. Pew's period of management.

Q. Did any of your information about the location come from Mr. Pew?

A. I cannot say that it did, directly.

Q. Do you know about this location or these locations of the points of delivery being involved in litigation, to which Mr. *Pew* testified? (Should this be "Quay"?)

A. I do not.

Q. You don't know Mr. *Pew* testified that they were at the state line or on the West Virginia side in all cases?

A. I do not.

Q. Where is the point of delivery to the Fayette County Gas Company?

A. The point of delivery is at or very near the state line between the states of Pennsylvania and West Virginia. Whether the lines of the Hope Company extend over into Pennsylvania at all or
594½ not, I am unable to state. The gas is measured at a point about one-half mile south of the state line, in the state of West Virginia, but the Hope Natural Gas Company owns the line leading from that station to the station line. Whether it extends into the state of Pennsylvania or not, I am not informed.

Q. And where are the points of delivery of the supply to the Peoples Natural Gas Company?

A. The delivery to the Peoples Company is made at the measuring station located in Greene County, Pennsylvania, located near Brave Station, in the State of Pennsylvania.

Q. How near to the state line?

A. Very close; I don't think it is more than 500 feet, maybe not that much, in the State of Pennsylvania.

Q. Is that a matter of information furnished you or a matter of personal knowledge on your part?

A. It is both information and personal knowledge, as I was connected with the Peoples Natural Gas Company at the time this connection was made. I recollect that the Hope Company brought the lines to the measuring station.

Q. You have been there to that point of connection?

A. Many times.

Q. Do you know where the boundary line is?

A. I did know where. I have had occasion to look up the state line between Pennsylvania and West Virginia at that point, on account of business matters that we had, in which that was involved.

Q. Now, how and when did you ascertain the location of
595 that boundary line at that point?

A. About 1907 or '08.

Q. How did you locate it?

A. We looked up the records as far as we were able to find them, and got the information from the residents of that vicinity.

Q. Did you survey the line?

A. No, we did not survey it. That is, I didn't; now I am not at all sure that our engineers did not survey and locate that line as definitely as it could be done.

Q. You simply ascertained that location of the line as best you could from the examination of the records and from information?

A. The best information we could get as to where it was located, as it was generally known where the state line between the two states was located, by people living in that vicinity.

Q. Did you find the boundary line marked?

A. I can't say that we did; I can't recollect that.

Q. What is the other point of delivery to the Peoples Natural Gas Company?

A. All of the gas is delivered to the Peoples Natural Gas Company at that point, although the Peoples Company own the line
596 leading to the west from the measuring station to the state line, or thereabouts.

Q. You refer now to the point where the line crosses just north of Littleton?

A. I do.

Q. Where is the point there?

A. As I say, the gas is delivered to the Peoples and measured at the station at Brave; but the Peoples Company own the line to the point where it crosses the state line north of Littleton, or very close to the state line.

Q. And joins the Hope line at the station?

A. Joins the Hope line at that point. The gas is delivered to the Peoples Company and measured to them at the measuring station in Pennsylvania at Brave Station.

Q. Is the point of delivery to the River Gas Company shown on Pennsylvania Exhibit No. 15?

A. The lines of the Hope Gas Company extend across the river at the point shown on the map marked "To Marietta, Ohio," and the gas is delivered to the River Gas Company into their lines on the Ohio side of the river by the Hope Company. I know that, for the reason that the line crossing the river was broken this last winter, and the Hope Natural Gas Company laid a new line across the river, and connected to the lines of the River Gas Company on the
597 Ohio side.

Q. Was it beyond the state line?

A. Beyond the state line, upon the bank of the river.

Q. How far over on the Ohio side is this connection at or near Clarington with the East Ohio Gas Company?

A. As nearly as I can fix it from memory, I would say about 300 feet.

Q. And how, at or near Round Bottom?

A. Not quite as far at Round Bottom, as I recollect, as at Clarington,—possibly 150 feet from the low water mark of the river.

Q. How are those points of delivery indicated on the ground?

A. I am not positive whether gates are installed at the point or not, but my recollection is that there are gates at those points.

Q. Any measuring stations there?

A. There is a measuring station at the point north of Clarington. On the other line the measuring station is located on the West Virginia side of the river; gas is measured on the West Virginia side at that point.

Q. Now, how about the delivery to the Northwestern Ohio Natural Gas Company? Where is that point of delivery?

A. The gas which is taken by the Northwestern Ohio Natural Gas Company is transported through the lines of the Reserve Gas Company, which crossed the river at a point on the map marked
598 Boaz, about four miles south of Williamstown, West Virginia, at which point the Reserve lines cross the river and connect to the lines of the Connecting Gas Company in Ohio, and gas is then transported through the lines of the Connecting Gas Company and delivered to the Northwestern Ohio Natural Gas Company at or near Sugar Grove, in Hawkin,—or Fairfield County, Ohio, I forget which one.

Mr. Eagleson: Fairfield County.

A. Fairfield County, Ohio.

Q. Where is the point of connection of the Reserve lines with the Connecting Company lines?

A. My recollection is that that is also made on the Ohio side of the river. I had charge of constructing the first lines that were laid across the river by the Reserve Gas Company, and I recollect we laid the lines across the Ohio River for the Reserve Gas Company.

Q. How far from low water mark?

A. Possibly a couple of hundred feet, or something in that neighborhood—two or three hundred feet. Those lines, as I recollect, when they were built—and I had charge of several of them—were all laid up onto the high ground out of the river, on the Ohio
599 side of the river, by the Reserve Gas Company.

Q. The object in all of those cases was to get above the flood point?

A. Yes, and to have a definite fixed point where the property of one company ended and that of the other company began.

Q. Has this Connecting Company any territory or production of its own?

A. It has not, to my knowledge. The information I have is that it is a transporting company.

Q. Has it any lines other than the line you have mentioned?

A. It has two lines leading from the Ohio River, or near the Ohio River, to a point near Sugar Grove, in Fairfield County, Ohio.

Q. You know of no other property or pipe lines that it has?

A. I do not. It may have other property. That is all that I know of.

Q. It furnishes no consumers itself?

A. I believe not, unless there may be a few consumers—No, I believe not, for the reason that it transports gas for other companies.

Q. You spoke of the River Gas Company having some small production of its own, and of an instance or two when the gas from

the Ohio side went back into West Virginia. Has that occurred often?

600 A. Yes, that is the condition at all times. Take the town of Friendly, located in Tyler County, West Virginia, that town is entirely supplied with gas which the Hope Company purchases from the River Gas Company. The Hope Company has no line of its own leading to Friendly, West Virginia, and obtains all of the gas which it sells there from the River Gas Company.

Q. I thought the feeding back was into the lines of the Reserve Company?

A. What is that?

Q. I thought the feeding back of the River Gas Company was into the lines of the Reserve Gas Company?

A. No, sir. The point where the gas goes from Ohio into West Virginia is marked on the map at Friendly, Tyler County, West Virginia.

Q. The point I was interrogating you about was your testimony in chief, to the effect, as I noted it, that the River Gas Company mines feed back into the lines of the Reserve Gas Company. Was that incorrect?

A. That is incorrect, as I remember my testimony; because it is not a fact, as far as my knowledge goes. I think possibly what you have in mind is that I stated there was a connection at Boaz, West Virginia, between the lines of the Reserve Gas Company and the lines of the Hope Natural Gas Company at that point.

601 Q. With reference to the investment of the Hope Natural Gas Company, in giving the valuation of $37,500,000, did you include in that estimate the value of operated territory?

A. I did not.

Q. What is included?—Did you include the value of the various wells?

A. It includes the tangible material in the wells, that is, tubing and casing. It does not include any value for the gas which the well is producing.

Q. And does not include the labor cost, or rig cost?

A. It does not.

Q. Those last two items are intended to be included in your addition of twenty-one million odd dollars?

A. Those items were included in the item of twenty-one million and some odd dollars, which I gave yesterday.

Q. Do those two items of $37,500,000 and twenty-one million odd dollars make up your capital investment?

A. The item of $37,500,000, or approximately that amount, represents the capital account on the books of the Hope Company. The item of $21,000,000, which you refer to, was an expense account.

Q. You annually depreciate that capital investment, do you not? Do you adopt any particular rate of depreciation?

A. As I understand it, we do adopt a particular rate, which was practically fixed by representatives of the Department

602 in Washington, which has charge of those matters?

Q. What is that rate of depreciation, or what was it in 1919?

A. The rate of depreciation charged off by the Hope Natural Gas Company for the year 1919, was five per cent on field propery, excluding the cost of land owned by the company in field work; the depreciation on main line property, excluding land costs, which would be sites for compressing stations, and so forth, five per cent; the depreciation on city plants and distributing systems, also excluding land costs, three per cent; depreciation on physical oil properties, five per cent; depreciation on teams and teaming equipment, 12½ per cent; depreciation on trucks and automobiles, 25 per cent. This information is furnished me by Mr. R. D. Beardsley, the treasurer of the Hope Natural Gas Company, who has charge of the books of the company.

Q. How long has the Hope Company been depreciating its property, either on this basis or on some basis established by itself?

A. Mr. Beardsley also informs me that the Hope Company commenced depreciating its property along about the years 1903 or '04.

Q. By "field property," I understand you to mean leases operated and unoperated, among other items, including wells?

603 A. I do not so understand it. It is my understanding that the value of leaseholds and wells, other than the tangibe material in the wells, is not taken into consideration in figuring off this depreciation.

Q. Is the life of the gas wells taken into consideration at all, in the making up of your percentage of depreciation?

A. It is not.

Q. Do you make no provision or allowance for the depreciation in value of your gas territory, in one form or another?

A. Not in taking depreciation.

Q. How do you make allowance for the lessening value of your wells and gas territory?

A. Since the year 1918, we have been making allowance for the gas taken out of the fields through a depletion report. This was not taken into consideration previous to the year 1918, and is not deducted from the investment capital.

Q. It is not?

A. No.

Q. If I understand you correctly, your capital investment of $37,500,000 has had no deduction made for depletion?

A. It has not.

604 Q. Do you establish or carry a reserve or sinking fund to take care of that depletion?

Mr. Weil: Just a moment. This cross examination is objected to, for the reason that the witness stated in his examination in chief, in giving the amount of the investment, that the gas territory or leaseholds were carried at the cost thereof, and not at any valuation placed upon them as gas producing or gas territory. Therefore this examination, with reference to a depletion charge against gas territory, which is not carried upon the capital account, as stated by the wit-

ness, is not cross examination with reference to the capital account, as stated by the witness, the details of which were given.

Mr. Hoffheimer: I think Mr. Weil makes the common mistake,—I thought he had overcome that—of assuming that the examination and the witness's answers in chief are conclusive upon the cross examiner.

The Commissioner: Note the objection and take the answer.

605 A. We have not established any sinking fund to take care of this account. I wish to say, however, that I am not a bookkeeper, and do not feel that I am qualified to testify in regard to the accounts of the company. If you desire any information involving the accounting, I would prefer that it should be obtained from the treasurer of the company, who is qualified to give you that information.

Mr. Steptoe:

Q. We will dispose of the matter in about two more questions, which I think you can answer, Mr. Sullivan. Doesn't your company carry upon its books a value under the heading "Natural Gas Deposits?"

A. We do.

Q. What was that value for the year 1919?

A. The beginning or the close?

Q. You may take that valuation as of the beginning of the year 1918.

A. At the beginning of the year 1918, that value was $24,811,-969.42.

Q. What amount, if any, has been deducted from that valuation for depletion, and for what period?

A. There was deducted from that valuation for a period of two years ending December 31, 1919, the sum of $5,255,642.97.

606 Q. Do you know on what basis or principle that amount of depletion was figured, and why?

A. Yes. That depletion was arrived at by a comparison of the rock pressures in the field at the beginning of the year 1918, as compared with the rock pressures existing in the field at the end of the year 1919. The comparison of the pressures was made as of the date September 30, 1917, September 30, 1918, and September 30, 1919, instead of at the end of the year. This for the reason that it is possible to shut in more wells during the summer season, in order to obtain the rock pressure, than would be the case if an attempt were made to obtain the pressures in cold weather, when there is a large demand for gas. In addition to the rock pressure method of determining this depletion, the quantities of gas taken out of the field and sold during that period are also considered, and the depletion arrived at in that manner.

Q. And from the data you have mentioned, you estimated and took into consideration the probable life of the field?

A. We did.

Q. Now, with regard to the amount of over one hundred million

dollars spent in West Virginia by the hope Natural Gas Company, was that estimate figured to cover all expenses for all purposes?

A. It was, but, as I stated in my previous testimony, my
607 impression is that it exceeds that sum by a very considerable item. However, I have no definite way in arriving at the total amount of money spent by the Hope Natural Gas Company in West Virginia.

Q. Then it would include oil and oil wells, and gasoline stations, and such items of investment as made in your manufacture and disposition of gasoline?

A. No, sir. I was not including those figures. I was not taking into consideration the money invested and the property accounts. It was the money spent in West Virginia for items such as labor, lease rentals, royalties, and material purchased in West Virginia— No, not material purchase. It was mainly expense items and not investments.

Q. Relating only to the gas business——

A. No.

Q. —not to your oil?

A. No, it related to all expenses in the State of West Virginia, whether for oil or gas purposes or gasoline purposes.

Q. Is the company's property in oil and oil wells, gasoline and gasoline stations, figured in that capital investment of $37,500,000?

A. The investment in oil wells and in gasoline stations is included in the $37,500,000 item, but that does not include the item
608 of labor and items of that character, which were charged to expense. It merely includes the physical property of the company.

Q. Are those expenditures, as well as the expenditures of the company for conducting and operation of the gas business, paid out of current income?

A. They are paid out of the income from the different departments.

Q. And the property involved in your capital investment of $37,500,000 is paid for in the same way, out of income from the properties?

Mr. Weil: This is objected to as not cross-examination, the witness having stated this is the capital account and not an expenditure account that has been paid out of any particular properties.

The Commissioner: Note the objection; the witness may answer.

A. I am unable to answer that question. I don't know how those acounts are kept.

An adjournment was here taken until Saturday, June 12, at 10 o'clock A. M.

609 Saturday, June 12, 1920.

And now, Saturday, June 12, 1920, the hour of 10 o'clock A. M. having arrived, hearing resumed pursuant to adjournment.

Present: The Commissioner and counsel as heretofore noted, and Arthur E. Young, Esq., representing the Commonwealth of Pennsylvania.

T. O. SULLIVAN recalled.

Cross-examination (resumed).

Mr. Steptoe:

Q. On yesterday I asked you for your figures on the amounts used by the Hope Company in field service. Have you those figures this morning?

A. I have.

Q. Please state those amounts for the year 1919.

A. During the year 1919, the Hope Natural Gas Company used for its operations in the field,—drilling, pumping wells, and so forth—1,078,834,000 cubic feet of gas. It also used in connection with compressing stations, and so forth, during the year 1919,

610 3,887,666,000 cubic feet. A total used by the Hope Company in the year of 1919 of 4,966,500,000 cubic feet.

You also asked me the amount—for the quantity of gas used by other contractors in the field for drilling and operating purposes. I find the company sold to other contractors and companies for field operations, during the year 1916, 672,946,000 cubic feet of gas.

Upon examination of the books, I find that in my testimony in chief, giving the total sales of gas by the Hope Natural Gas Company in the year 1919, as approximately 67,000,000,000 cubic feet, I failed to include in these sales gas sold to the Northwestern Ohio Natural Gas Company, consisting of 5,796,504,000 cubic feet. This gas is transported out of the State of Pennsylvania through the lines of the Reserve Gas Company, and consists of gas purchased from the Reserve Gas Company by the Hope Company. That gas is delivered into the lines of the Connecting Gas Company, and transported by them and delivered to the Northwestern Oil Natural Gas Company, at Sugar Grove, Ohio. Mr. Beardsley, the treasurer of the Hope Company, informs me that there were two minor sales made from the lines of the Connecting Gas Company, which are included in the sales to the Northwestern Ohio Natural Gas Company.

Therefore, these figures do not check exactly with the amount

611 delivered by the Hope Company to the Northwestern Ohio Natural Gas Company, but they are very close. Adding this gas to the total sales of the Hope Company, makes total sales for the year 1919, 73,741,936,000 cubic feet. I might say that my approximation of 67,000,000,000 was made from memory, and now I am giving exact figures from the books. I also stated, in giving figures for the gas sold to other companies, the total of which was 59,642,489,000 cubic feet; and deducting these sales from the total sales of

gas, the sales to the Northwestern Ohio Natural Gas Company included, it leaves a balance of 14,099,447,000 cubic feet of gas sold by the Hope Company for all purposes in the state of West Virginia—sold and delivered for all purposes in the state of West Virginia—deducting from this amount the gas used by the Hope Natural Gas Company for its own operations in the field, it leaves a balance of 9,132,947,000 cubic feet sold to parties other than the Hope Company in West Virginia, during the year of 1919.

Q. Would somewhat the same modification, substantially the same, apply to your testimony regarding previous years, as to the totals consumed in West Virginia, and marketed?

A. The same correction would substantially apply to the former years. Of course, there is considerable variation from year
612 to year in the amount of gas sold in the field and also used by the Hope Company itself in its operations; that depending largely on the conditions of the operations through the field whether there is much or little drilling being done.

Q. The total you have given for sales in West Virginia for the year 1919, for all purposes, includes the 672,946,000 cubic feet sold to other contractors and drillers in the field?

A. It does.

Q. And it includes sales and deliveries to local utility companies, as well as sales and deliveries to those consumers, domestic and industrial, which the Hope Company furnishes directly?

A. It does.

Q. On yesterday you told us of purchases and the taking over by the Hope Company of the property and assets of the Mountain State Gas Company. Has the Hope Natural Gas Company taken over any other local utilities in West Virginia?

A. It has not, since I became manager of the Hope Company on July 1, 1918, with the exception of possibly two small gas companies; one known as the Rural Gas Company, operating in West Virginia, which supplied a few customers; and also the lines and cus-
613 tomers of a company as the Berea Light, Heat & Power Company, supplying customers in Berea, and operating in Ritchie County, West Virginia. This company supplied a few customers, more than 100—practically about 100 customers. I am not very familiar with the plant of the Rural Gas Company, for the reason that the negotiations for the purchase of the plant were under way and practically completed about or soon after the time that I became manager of the Hope Company. I am familiar with the purchase of the other plant, for the reason that I conducted the negotiations myself.

Q. Did each of the two companies you have mentioned have their gas territory and production?

A. The Berea Light, Heat & Power Company had two gas wells and a few acres of territory. As I recollect, one of those wells was located on a piece of property of about a quarter of an acre, or possibly half an acre. The other was located on a little larger piece. I might say that the reason why the company purchased this company was because of the fact that the two wells which the Berea Com-

pany owned were practically exhausted and were not supplying a sufficient amount of gas to take care of the customers of the company, and they were very anxious to get out of business and dispose of their property.

614 Q. How are those two companies connected with the lines of the Hope, for service?

A. The Hope Company made connection of its lines in the case of the Berea Light, Heat & Power Company to supply the surplus quantity of gas needed in order to supply the customers of that company, after we acquired possession of their plant; this in addition to what gas their own wells would produce. In the case of the Rural Gas Company, my recollection, and the information I have, is that prior to the purchase of this company, the Hope Company was selling gas to the Rural Gas Company, and the connections were made prior to the purchase of the property of the Rural Gas Company. The Hope Company continued to supply gas to the customers on the lines of the Rural Gas Company in the same manner in which it had been previously supplied.

Q. Are the connections for these two companies made on the discharge lines or the suction lines of the Hope Company?

A. To the best of my information the connection supplying the consumers of the Berea Light, Heat & Power Company is made on the discharge line of the Hope Natural Gas Company leading from Craig Station. I am not positive that I am right in this, but I believe that I am. I do not know where the connection is made

615 which supplies the Rural Gas Company.

Q. Do you know whether the connection for the Rural Gas Company is to a suction or to a discharge line?

A. I do not.

Q. It might be upon either?

A. It might.

Q. In acquiring these two small companies, did the Hope Company take over all of the property, assets and rights of both?

A. In acquiring the property of the Berea Light, Heat & Power Company, the Hope Company only acquired its wells, pipe lines and meters. It did not secure any of the franchises or other rights of the Berea Light, Heat & Power Company. I do not know what they secured from the Rural Gas Company.

Mr. Young:

Q. How about the acreage, did they get the acreage of the Berea?

A. Yes, sir, the acreage and rights of ways, pipe lines, wells, meters, and such loose material as the company had in stock.

Mr. Steptoe:

Q. You are referring now to the Rural?

616 A. No, I am referring to the Berea Light, Heat & Power Company. I do not know what we acquired from the Rural Gas Company.

Q. Have you any recollection or knowledge, touching the pur-

chase and taking over by the Hope Company of a small West Virginia Corporation doing business near Clarksburg, known as the Hutton Gas Company?

A. I have not.

Q. Do you have any recollection or knowledge touching the acquisition by the Hope Company of the property, assets, franchises, and so forth, of the Mt. Clare Gas Company, another West Virginia corporation, doing business near Mr. Clare?

A. I have understood that the Hope Company made some purchase from the Mt. Clare Gas Company, but as to what it consisted of, I have no knowledge.

Q. Is the Hope Gas Company now serving the consumers who were formerly furnished by the Mt. Clare Natural Gas Company?

A. The Hope Natural Gas Company is supplying gas to consumers in the village of Mt. Clare. Whether or not those consumers were formerly consumers of the Mt. Clare Gas Company, I am not informed.

Q. Do you know how the connection is made for that service?

617 A. I do not.

Q. Do you know where the connection is, and whether it is to a suction or a discharge line?

A. I do not.

Q. Have you any knowledge or information touching a purchase by the Hope Company of the leasehold properties, wells and other property owned by one Godfrey Cabot, in Pleasants or Calhoun Counties, West Virginia, or both?

A. I have no knowledge of any purchase of wells or leaseholds having been made by the Hope Natural Gas Company from Mr. Godfrey L. Cabot, in either Pleasants County or Calhoun County.

Q. Do you know of a purchase by you from Mr. Cabot of any property in West Virginia?

A. We are purchasing gas from Mr. Godfrey L. Cabot in Calhoun County, West Virginia.

Q. Is that under a contract in writing?

A. It is.

Q. Is that writing recorded, do you know, in any county of West Virginia?

A. I am unable to say whether that contract is on record or not, but I presume it is.

Q. Can you give us, briefly and in substance, the nature of that contract? Is it anything more than a mere purchase of gas produced by Mr. Cabot?

618 A. It is simply a purchase of gas produced by Mr. Cabot, with the right to the Hope Company of erecting a compressing station and houses, and so forth, for its employees, on land owned by Mr. Cabot.

Q. Does that contract take all of the gas production of Mr. Cabot?

A. It does not. It takes such gas as was formerly used by Mr. Cabot in two of his carbon plants, located near Grantsville, in Calhoun County, West Virginia.

Q. At what point is that gas taken into the lines of the Hope Company?

A. That gas is taken into the lines of the Hope Company at a point near Grantsville, West Virginia. It is not shown on the map which is in evidence here, for the reason that the contract was made and the station built since the date of the map—which I believe is December 31, 1917.

Q. Does the contract with Cabot stipulate at what pressure the Hope Company shall take the gas from the wells and production of the vendor?

A. The contract does so provide.

Q. What is that pressure, and at what points?

A. My recollection is that the stipulation providing the pressure is that the gas shall be taken by the Hope Company at or near Zero.

Q. At the well north?

619 A. No, sir, at the point where it is delivered to the Hope Company at the station.

Q. Do you mean Cabot Station, which you have located a few miles from Grantsville, Calhoun County?

A. I do.

Q. Have you any knowledge or information touching the taking over by the Hope Company of a certain portion of the property and assets of the Wheeling Natural Gas Company, the Tri-State Natural Gas Company, the Manufacturers Light & Heat Company, of West Virginia, on or about the first of May, 1910?

A. I know that the Hope Natural Gas Company purchased certain line, leaseholds and a few gas wells from the Manufacturers Light & Heat Company, of Pittsburgh, Pennsylvania, on a contract dated about May 1, 1910; just which one of the subsidiary companies of the Manufacturers Light & Heat Company held title to this property, I do not remember.

Q. That was a contract of purchase, was it not, and the actual transfer by formal deed was made later?

A. I am not informed as to the time of the actual transfer, but it is my impression that the transfer and everything was concluded at the date of the contract.

Q. The Hope Company took over the property embraced

620 in the contract as of May 1, 1910?

A. That is my understanding.

Q. And you are not familiar with the legal process, whereby title was vested in the Hope Company?

A. I am not.

Q. Can you tell us briefly what gas territory, and where located, was transferred in that field?

A. I cannot tell that from memory, as that transaction was all concluded prior to my connection with the Manufacturers' Light & Heat Company, and I had no occasion to look it up specifically.

Q. Do you know about what pipes and pipe lines were transferred?

A. I know that there was one pipe line included in that purchase, leading from a point marked "Bates" on the map, located in Doddridge County, West Virginia. It is my impression that that line extended in a southerly or southeasterly direction, although I am not sure as to that, and I don't know where it ended. There may have been some other small branch lines connected with this, but I am unable to say whether there were or not.

Q. Might it not be, Mr. Sullivan, that the chief pipe line transferred was a 12-inch transmission line extending from Lost
621 Creek, in Harrison County, to the Sedalia pump station in Doddridge County?

A. Well, that might be the case. I was starting from the other end of the line, near where the Sedalia Station is located, in Doddridge County, and you start probably from the opposite end, which may have been located in Harrison County. As I stated, I don't know where the other end of the line was.

Q. Where was, and is, what is known as the Lost Creek main line?

A. I do not know. That is more or less of a local term, and I don't know where it is.

Q. But there was and is a 12-inch line running between the point we have referred to, namely, the Sedalia pump station, and Lost Creek, and that is yet owned and operated by the Hope Natural Gas Company?

A. There was and is such a line, as I stated, running from Bates, in Doddridge County, in a southern or southeasterly direction, but the point on the southern end of this line I was unable to locate, with regard to the line which was turned over by the Manufacturers Light & Heat Company to the Hope Natural Gas Company.

Q. Do you know whether there were any rights of way for pipe lines transferred in that same deal?

A. I believe that there was, although I am not familiar
622 with the property that was transferred, only in a general way.

Q. Do you know, in a general way, whether or not there were gas purchase contracts embodied in the same transaction?

A. My recollection is that there were no gas purchase contracts included in the sale of the property to the Hope Company.

(Paper shown witness.)

Q. Now, in order that you may not be at a disadvantage in this particular matter, and in order to refresh your recollection and information, I hand you here what purports to be a certified copy of a deed, made under date of June 27, 1911, recorded in the Office of the Clerk of the County Court of Harrison County, in Deed Book, No. 202, page 375, to carry out a prior contract recited to be as of date of May 1, 1910; the deed being between the Wheeling Natural Gas Company, the Tri-State Gas Company and The Manufacturers Light & Heat Company, corporations organized and existing under the laws of the State of West Virginia, parties of the first part; The Manufacturers Light & Heat Company, a Pennsylvania corporation, party of the second part, and Hope Natural Gas Company, a West

Virginia corporation, party of the third part. Please ex-
623 amine that deed, and especially Schedule 3, mentioned in the deed, and state if it does not purport to transfer a number of gas purchase contracts theretofore owned by the Wheeling Natural Gas Company and the Tri-State Natural Gas Company?

Mr. Eagleson: The question is objected to, on the ground that the instrument speaks for itself, and upon the further ground that it would not be competent testimony at this time and in the manner offered. On the further ground that it is incompetent, irrelevant and immaterial.

The Commissioner: Let the objection be noted, and take the answer.

Mr. Steptoe: In reply to the objection: we do not propose to offer the deed in evidence at this point, but are exhibiting it to the witness, in order that he may refresh his recollection and not be at the disadvantage of testifying from mere recollection.

A. This deed which you have handed me seems to show that these gas purchase contracts were included in the deed from the
624 Manufacturers Light & Heat Company to the Hope Natural Gas Company. I was under the impression that these contracts had been transferred under a separate assignment.

Mr. Eagleson: Now we ask that the answer be stricken out, for the reasons stated in the objection.

Mr. Steptoe:

Q. Having that deed before you, will you please tell us the counties in which are located the various leases and leaseholds transferred?—Simply, in a general way, without going into details.

Mr. Eagleson: The same objection.

The Commissioner: Let the objection be noted.

A. This paper which you have handed me shows that leases located in Harrison County, West Virginia, were transferred; also leases located in Lewis County, West Virginia; also leases in Marion County, West Virginia; also leases located in Upshur County, West Virginia; also leases located in Braxton, West Virginia; also
625 leases located in Gilmer County, West Virginia.

Mr. Eagleson: I move that the answer be stricken out, for the reasons stated.

Mr. Steptoe:

Q. Are the leases acquired by the Hope Company in that transaction included in the leasehold acreage of the Hope Company which you gave us at this hearing?

A. They undoubtedly are, in the earlier years. Whether or not the Hope Company is holding those leases as yet, I would be unable to say, but I presume that they are—some of them.

Q. There might be some changes by reason of the surrendering

of some of the leases or the expiration of the terms of some of them, that you did not care to renew?

A. That is correct.

Q. Is the property acquired in that transaction included in and as a part of the Hope Company's capital investment of $37,500,000, which you gave us on yesterday?

A. Any property that we still own is included.

Q. Now, since May 1, 1910, when the transfer of this property was contracted for, has the Wheeling Natural Gas Company held any property or engaged in the natural gas business in the counties of Harrison, Lewis, Upshur, Braxton, Gilmer and Marion, that you have mentioned?

626

A. I do not know.

Q. Do you know of their doing any business at the present time in any of those counties mentioned?

A. To the best of my recollection, they hold some property and are doing business in Harrison County, although I may be mistaken as to that. I don't recollect of any business in any of the other counties you mentioned. I am also under the impression that the Manufacturers' Light & Heat Company hold territory and are doing business in Marion County, although I may be mistaken as to that also, as I have no way of determining that, only as my memory serves me.

Q. The Wheeling Natural Gas Company and the Tri-State Natural Gas Company and the Manufacturers Light and Heat Company of West Virginia were all owned and controlled by the parent company, the Manufacturers Light and Heat Company of Pennsylvania, while you were general manager, were they not?

A. They were, during the earlier years. Later the properties were all merged into the property of the Manufacturers Light & Heat Company of Pennsylvania.

Q. That merger or taking over of the physical properties was along about May, 1915, was it not?

627

A. I believe that was about the time. I can't remember the date.

Q. Now, while you were general manager, from the year 1910 on, did the Manufacturers Light & Heat Company, of Pennsylvania, or any of its subsidiaries, hold any property or conduct any operations, or make any gas purchases, in Harrison, Marion, Lewis, Upshur, Braxton and Calhoun Counties, West Virginia, excepting possibly some territory held in the northern part of Marion County?

A. To the best of my recollection, during the time I was general manager of the Manufacturers Light & Heat Company, the company held leases and drilled wells in Marion County, West Virginia. It is also my recollection that they held some leases in Harrison County, West Virginia, although I am not clear on this point. I do not recollect of their holding territory or operating in the other counties which you have mentioned.

Q. How about Doddridge County?

A. We were operating in Doddridge County.

Q. On and after May 1, 1910?

A. Yes, sir.

Q. Will you refer to the map put in evidence as Pennsylvania Exhibit No. 15, and tell us how near to the town of Weston,
628 the county seat of Lewis County, West Virginia, your nearest transmission or discharge line ran, approximating it upon the scale of the map?

A. An examination of the map discloses that the nearest discharge line to the City of Weston, West Virginia, is the discharge line leading from what is known as Weston station, located about three miles from Weston, as nearly as I can estimate the distance on the map.

Q. Has the Hope Company territory and production in the immediate vicinity of that town?

A. I am inclined to think that the Hope Company has territory and production reasonably close to Weston, West Virginia.

Q. The Hope Company has large holdings in Lewis County, hasn't it?

A. They hold considerable territory in Lewis County, West Virginia.

Q. What is the nearest discharge line to the town of Salem, in Harrison County, West Virginia? That town does not appear to be upon your map, but is located about a mile from the border line between Doddridge County and Harrison County, and about fifteen miles west of Clarksburg?

A. An examination of the map which I have before me shows that the Hope Company has a discharge line passing—from one of its stations—passing within a distance of approximately one mile from Salem, West Virginia.

629 Q. What is the nearest discharge line to the town of Shinnston, Harrison County?

A. I am unable to state that.

Q. Is that shown on your map?

A. No.

Q. Since that town does not appear upon your map, I will say that it is located on the West Fork River, approximately three or four miles from the border line between Marion and Harrison Counties.

A. I am unable to locate the town of Shinnston. I could not say how close we have a line there.

Q. How far is it from your transmission lines going to and through Peora station, due eastward to the West Fork River?

A. There is a river shown on the map which I presume is the West Fork River, although I am not sure of it. The distance from Peora station to that river I would estimate at about between two and three miles.

Q. Please give us the distance between your nearest transmission line and the town of Fairmont, in Marion County?

A. About ten miles, as near as I can estimate it, from the map which I have before me.

Q. I believe you have already stated that there already
630 exists an emergency connection between the Hope Natural Gas Company and the Monongahela Valley Traction Company's distributing system—the latter company furnishing Fairmont?

A. That is in accordance with the information which I have.

Q. Now, what is your nearest line to the City of Morgantown?—the distance between the two.

A. Judging from the map, I would estimate that to be also about ten miles, from the nearest discharge line from a compressing station.

Q. Has the Hope Natural Gas Company leases, operated and unoperated, in each of the counties in which those towns are respectively located?

A. They have.

Q. You referred, on direct examination, to sales made to local distributing companies, in West Virginia, and arrangements made for those sales by contracts or correspondence. With what local companies have you contracts?

A. We have a contract with the Light, Fuel & Power Company supplying Gassaway and Sutton, West Virginia. To the best of my recollection, that is the only company with which we have a written contract, signed and executed by the officers of both companies.

Q. What is the arrangement for supplying gas to the other local companies?

631 A. The arrangement with the Clarksburg Light & Heat Company was done by correspondence—by verbal arrangement and correspondence. And this is true also of the other utility companies to which we are supplying gas in West Virginia.

Q. Can you produce the contract between the Hope Company and the Light, Fuel & Power Company?

A. I can.

Q. Will you please do so?

A. I will.

Q. And when was the arrangement made with the Clarksburg Light & Heat Company?

A. The last arrangement was made with them about—I think it was in September or October of the year 1919.

Q. What arrangement existed prior to that time, if you know?

A. Verbal, or an arrangement by letter.

Q. What was the arrangement?

A. Do you refer to the arrangement made last year?

Q. Yes.

A. The arrangement was to the effect that the Hope Company would sell to the Clarksburg Light & Heat Company such surplus gas as the Hope Company might have, up to the requirements of the Clarksburg Light & Heat Company, after the consumers and customers connected to the lines of the Hope Company were supplied.

When I say customers, I refer to the other contracts which
632 the Hope Company had and which it was obligated to fulfil.

When speaking of consumers, I am referring to those connected directly to the lines of the Hope Company, and such other obligations as it might have in West Virginia.

Q. The contract obligations you refer to are the contracts with the Peoples Natural Gas Company and other purchasing companies mentioned in the several contracts in writing that you offered in evidence on your examination in chief?

A. It referred to those contracts and also to any other contracts which we might have in the state of West Virginia, which we were obligated to fulfil.

Q. Was the prior arrangement between the Hope Company and the Clarksburg Light & Heat Company substantially the same?

A. It was.

Q. And that was true with all prior arrangements for the sale and delivery of gas by the Hope Company to the Clarksburg Light & Heat Company, namely, that it was the surplus after fulfilling the obligations then existing, which the Hope Company had?

A. That is my information. I am not familiar with any arrangements that might have existed between the companies previous to July 1, 1918. My information leads me to believe that the same condition existed.

Q. To your knowledge, there has never been a formal con-
633 tract in writing between the Hope Company and the Clarksburg Light & Heat Company?

A. Not to my knowledge—any more than the correspondence which I have referred to.

Q. What is the term of the present arrangement, made in September or October, 1919?

A. There was no definite term named. My recollection is that it was to be subject to termination at any time by either company on thirty days' notice.

Q. Now, are the arrangements under which you are supplying gas to the other local utilities in West Virginia of the same character as the arrangement made with the Clarksburg Light & Heat Company, in September or October, 1919?

A. In a general way, to the best of my knowledge, they are, with the possible exception of the Monongahela Valley Traction Company; which, as I stated, was merely an emergency connection, and was not to be used by either company unless in case of an emergency, such as a broken line or something of that character.

Q. Is that arrangement in force for any particular length of time?

A. It is not.

Q. Terminable by either party at will?

A. It is.

634 Q. Have you any official connection with the Clarksburg Light & Heat Company, Mr. Sullivan?

A. I have not.

Q. Do you know whether or not the Standard Oil Company of New Jersey is interested in the Clarksburg Light & Heat Company as stockholder?

A. I have understood that they are, although I do not know that of my own knowledge; but it is my general understanding that they are.

Q. To what extent, or percentage of the stock?

A. I have understood that it was in the neighborhood of 50 per cent. It might be 51 per cent. I am unable to state that definitely

Q. Is it your understanding that the Standard Oil Company of New Jersey holds the controlling interest, or a majority of the stock?

Mr. Eagleson: Objected to as not proper cross examination, and it is not the proper way to prove that fact, if it be a fact; and for the further reason that it is incompetent, immaterial and irrelevant.

The Commissioner: Note the objection.

A. I do not know what their interests are—how much?

635 Mr. Steptoe:

Q. You stated that the Hope Company was owned by the Standard Oil Company. What Standard Oil Company, do you mean?

A. It is my understanding that it is the Standard Oil Company of New Jersey.

Q. It is that same company, the Standard Oil Company of New Jersey, that holds 51 per cent of the Reserve, and the entire capital stock of the Peoples Natural Gas Company?

A. My information as to the amount of stock that the Standard Oil Company owns in any of those companies is limited merely to what I have heard, but in all instances, whatever the quantity of stock they may own in a company, I am referring to the Standard Oil Company of New Jersey. I am not pretending to say what their interests may be in any of those companies.

Q. The particular Standard Oil Company which you had in mind in your testimony in chief?

A. That is the company, yes, sir.

Q. How long has there been a connection between the lines of the Hope Company and the distributing system of the Clarksburg Light & Heat Company?

A. I am unable to state that, but it has existed for some few years. Just when that connection was made I do not know.

636 Q. Its transmission lines are in close proximity to that city, are they not?

A. The map which I have before me would indicate that the nearest transmission is distant about three miles, I would say, from the City of Clarksburg.

Q. The Hope Company has one or more compressor stations in the immediate vicinity, has it not?

A. In the vicinity—distant some few miles from the city.

Q. As a matter of fact, the chief office of the Hope Company in West Virginia is in that city, and its West Virginia management is conducted from that point, is it not?

A. It is.

Q. The local offices, and the superintendent, and all of the field management are conducted from that point?

A. The superintendent is located at Clarksburg, West Virginia, and the instructions which he gives to his men through the various districts emanate from that point.

Q. Has your company production and leases in Harrison County to a considerable amount?

A. We have.

Q. As a matter of fact, it has leases and production and lines on all sides of Clarksburg?

A. The lines of the company are located through that general district surrounding Clarksburg.

Q. Do you know whether the officers or board of directors of the Clarksburg Light & Heat Company are in any way identified with, or the same personnel as the board of directors of the Hope
637 Company?

A. Mr. Corrin, the general manager of the Reserve Gas Company, is a member of the board of directors of the Clarksburg Light & Heat Company. I believe that Mr. John B. Tonkin, vice president and general manager of the Peoples Company, is also a director of that company, although I am not sure of that fact. I can ascertain that, though, if you wish.

Q. You do know that all of the meetings of the board of directors of the Clarksburg Light & Heat Company are held in Pittsburgh, in the offices of the Hope Company, do you not?

A. I do not know that all of the meetings of the Clarksburg Light & Heat Company are held in Pittsburgh, in the offices of the Hope Company. I do know that some of them are.

Q. Now, how long has the gas territory of Harrison County been leased or taken up, speaking now in general terms?

A. To the best of my recollection, territory in Harrison County has been leased for oil and gas purposes, extending over a period of probably twenty-five years; maybe not quite so long, maybe longer. Of course, leasing has been going on continuously, you might say, up until the present time—property being leased in Harrison County.

Q. That is, that county and Marion County, lying in the northern part of West Virginia, are the localities earliest developed, or
638 developed in the earliest period of the gas industry in West Virginia, are they not?

A. I am unable to say as to that, but my belief is that they were among some of the earlier counties which were developed.

Q. In a general way, the development commenced in the northern part of the state, and has proceeded southwardly?

A. That has been the general direction of development.

Q. Is there any additional or available territory that you know of, in Harrison or Marion Counties?

A. There is not, although that does not mean that the territory is all leased. There may be territory there, and probably is, which will be productive of gas, or which will not be productive of gas—no one knows as to that.

Q. Why would you say that that territory is not, or has not, been taken up, either by your company or some other company?

A. So far as our company is concerned, we have been carrying about as much territory as we thought we ought to carry, or could afford to carry. And any unleased territory that we know about, we might consider it as being rather unfavorable for the production of oil or gas. However, that doesn't mean anything; some other person might look at it in an entirely different light.

Q. Well, is there any considerable block of loose territory?

639 A. I don't know of any. I don't know what is leased or is not leased.

Q. As a matter of fact, in view of the shortage of your company, if you knew of any considerable territory that was promising, your company or some other company would have taken it up?

A. If we knew of any considerable territory that we considered as being promising, we would certainly take it up. I can't speak for the other companies.

Q. If there is to be any future discovery of fields of any size or importance, it must be toward the southerly end of West Virginia, if in West Virginia at all, must it not?

A. I couldn't say as to that. We thought the likelihood of a gas field of any size being located or discovered close to Pittsburgh was almost out of the question, and still last year there was a very considerable pool of gas developed at McKeesport, close to Pittsburgh. There is room in certain sections of West Virginia; there might be a very considerable gas development, even in the northern parts of it. It might be that gas would be found in deeper sands, which have not been reached as yet, and geologists are inclined to believe that this will be the case.

640 Q. Taking, for example, the specific territory or county of Harrison; would you say that there is anything more than scattering farms through the county that could be acquired for oil or gas development—especially gas?

A. My general information leads me to believe that a very considerable portion of Harrison County is under lease, by either some company or individuals at the present time. Of course, leaseholds are usually made for a term of years, and those are expiring almost constantly. In some cases, they are being renewed by the companies or individuals that hold them, and in other cases they are not.

Q. In a general way, do you know about the gas field in Harrison county in the early stages?

A. I do not, only from general information. I know that gas has been produced in Harrison County in very considerable quantities for a good many years past.

Q. Do you know how that field in Harrison and Lewis Counties of West Virginia compares with other gas fields, with reference to production and quantity?

A. My general information has been that the wells in those counties, or in certain portions of the counties, have been rather prolific of gas,—that they have been very good producing wells, rather large, in fact.

Q. How would they compare with other fields?

A. Very favorably with any of the fields that I know anything about, in the eastern part of the country.

Q. Both in regard to quantity and staying qualities?

641 A. Very favorably as to quantity; perhaps not quite so favorably as to staying qualities. Because as a general proposition, in any territory where gas wells produce in large quantities, the tendency is to exhaust the supply quicker than it would be exhausted if those wells were producing in smaller quan-

tities. In other words, the life of a field would extend over a longer period of years where the wells were rather small than where they were large.

Q. And that territory has been very considerably drawn upon?

A. It has.

Q. Do you know the approximate rock pressure of the wells first drilled in that section?

A. I do not.

Q. You do not know how much the decline in rock pressure has been, do you?

A. I do not, from memory. I have no doubt I could ascertain the pressure of certain wells drilled by our company in Harrison County, and learn what the rock pressure of those wells was, but I do not remember that.

Q. Would you be prepared to say that that decline has been very great?

A. My information leads me to believe that the decline has been very considerable.

Q. I believe on yesterday you fixed the approximate rock pressure of the present time at less than 100 pounds, as an aver-

642 age?

A. I believe I have an average rock pressure of certain wells in Harrison County yesterday, and I really forget now whether it was a little less than 100 pounds or a little over 100 pounds, but I know it was in that neighborhood.

Q. Why was that average pressure ascertained by your company?

A. At the wells.

Q. I say why?

A. Why?

Q. Yes.

A. In order to give the company a knowledge of what the pressure was in the field.

Q. Was that done as a basis for ascertaining, as far as you could, the quantity taken out and quantity remaining in the field?

A. It was for that purpose, in order to make estimates as to the probable—or, as to the decline in the field and the probable quantity of gas still remaining which could be obtained from the field through our wells.

Q. Are most of the holdings of the Hope Company in Harrison County operated?

A. My impression is that they are fairly drilled up. I have no doubt that there are many places where we will drill additional wells in Harrison County.

Q. The unoperated acreage of the Hope Company, as a

643 general statement, lies in what section of West Virginia?

A. Do you want me to name all the counties?

Q. You may state it in a general way.

A. I will give you the counties that have the most unoperated acreage?

Q. Yes.

A. The Hope Natural Gas Company holds considerable unoperated

acreage in Calhoun County, West Virginia, also in Gilmer County, West Virginia, also in Harrison County, West Virginia, also in Lewis County, West Virginia, also in Ritchie County, West Virginia. The counties named are three counties in which the larger blocks are located, exceeding 40,000 acres in each of those counties. We also hold considerable acreage in other counties which I have not named; this being taken from the statement showing the unoperated acreage as of December 31, 1919.

Q. I do not believe you have answered just what I sought to elicit. I wish to ascertain where the greatest percentage of operations of your company have been conducted; or, to put it in another way, in which of the counties where the Hope Company is operating is the Hope most drilled up? What counties have been operated and drilled to the greatest extent?

644 A. All that I can give you on that is the operated acreage carried on the books of the company in the various counties.

Q. Very well, suppose you, during the noon recess, have a statement made showing the operated and the unoperated acreages of your company in the various counties.

A. I have that statement right here before me now, if I can get it separated so that I can get the names of the counties.

Q. Of course, the greatest decline in rock pressure has appeared in those counties where the greatest amount of operating has been done? Is that not correct?

A. No, I could not say that that is correct. That might be the case.

Q. Very well; take by way of comparison the average rock pressure of Harrison County and that of Gilmer County. In which county has the pressure declined greatest?

A. My impression is that it has declined more in Harrison County than it has in Gilmer County, up to this time.

Q. And, as a general statement, it would be correct to say that the greatest decline would be where the greatest amount of operation has taken place, would it not?

A. No, I don't think that it would. In my opinion, the greatest decline would take place in the territory from which the larger amount of gas was taken out. That might occur through comparatively few wells, or through many wells. The operations

645 would be much greater in a county where a large number of wells were drilled than where only a comparatively few wells had been drilled, and still the decline might be greater where the few wells had been drilled, depending upon the porosity of the rock and the manner in which the gas had been taken out of the field.

Q. Substantially you have the same idea I sought to express. By "operations," I meant not the number of wells perforating the sand, but the extent of the development or gas taken out. In the latter event, it would be true that the rock pressure would decline most where the greatest amount of gas was taken out, whether by a few wells or a large number, would it not?

A. That would probably be the case, only that would be also governed by the size of the pool which the gas was being taken from.

Q. And in a general way, that is the explanation of the rock pressure in the northern counties, say Harrison County, having declined to a greater extent than the pressure in the southerly counties, such as Gilmer?

A. There is no doubt but what in those counties where operations have continued over a long period of years, and the gas has been taken from the fields, that the decline in those counties would
646 be greater than the decline in the newer counties, which have only been operated for comparatively short times and from which small quantities of gas—comparatively small quantities of gas—have been taken.

Q. Is it not also correct to say that where a field is operated to any extent, the decline in rock pressure is general throughout that field?

A. That varies considerably in different fields, depending on the character of the sands from which the gas is taken.

Q. Well, let us take, as an example, the county of Harrison again: Is the gas produced and marketed from that county as a general rule from any particular sand?

A. My general information leads me to believe that it is produced from different sands, possibly two or more.

Q. It being about time to adjourn for the noon hour, I will ask you, Mr. Sullivan, if you can, to let me have after lunch a statement showing the number of domestic consumers and the number of industrial consumers of the Hope Natural Gas Company, from the year 1910, to date, excluding from the industrial consumption the gas furnished or sold for field service and for compressor stations and other operations; and excluding gas sold in the field to other operators for drilling purposes.

Here a recess was taken until 1.30 o'clock, p. m.

647 Saturday Afternoon, June 12th, 1920.

And now, the hour of 1.30 o'clock p. m. having arrived, hearing resumed pursuant to adjournment.

T. O. SULLIVAN resumes the stand.

Cross-examination (continued).

Mr. Steptoe:

Q. Have you the data requested by me just before the noon recess, Mr. Sullivan?

A. I have, as nearly as I can get it.

Q. Please give me the data as you have it.

A. The number of domestic consumers supplied by the Hope Company in West Virginia at the end of the year 1910 was 12,627; at the end of 1911, 12,923; at the end of the year 1912, 13,475; at the end of 1913, 14,114; at the end of 1914, 14,653; at the end of 1915,

14,907; at the end of 1916, 15,476; at the end of 1917, 16,503; at the end of 1918, 16,640; at the end of 1919, 17,326.

The number of industrial consumers supplied by the Hope Company in West Virginia, commencing with the year 1910: At the end of 1910, 72; at the end of 1911, 80; at the end of 1912, 80; at the end of 1913, 119; at the end of 1914, 122; at the end of 1915, 129;
at the end of 1916, 118; at the end of 1917, 117; at the end
648 of 1918, 117; at the end of 1919, 115. This is with the consumers and contractors using gas for drilling and operating purposes in the field excluded, and also the accounts or number of points where gas is supplied to the Hope Natural Gas Company for drilling operations in the field, and operation of pump stations, and so forth, also excluded.

Q. There are included in your figures for domestic consumers, those consumers who were taken over along with such local utilities as were acquired, are there not?

A. The consumers on the lines of those companies which were acquired by the Hope Natural Gas Company prior to the end of the year 1919 are included in the number of consumers each year given you.

Q. You have produced, at my request, a contract in writing, dated November 22, 1911, between Hope Natural Gas Company of the first part, and The Light, Fuel and Power Company of West Virginia, of the second part, both being West Virginia corporations; is this the contract you referred to in your prior examination under which the Hope Company is now furnishing gas to the Light, Fuel and Power Company?

A. It is.

(The contract just identified, marked as West Virginia Exhibit No. 2.)

649 Mr. Steptoe: We desire now to offer in evidence West Virginia Exhibit No. 2; here agreeing that a copy may be made and substituted by the stenographer for the original, and the original returned to the witness.

Mr. Eagleson: To which offer the complainant States have no objection whatever.

Mr. Steptoe:

Q. Diverting to the matter of rock pressure: Assuming that the production in a given field is from a certain sand, for example the Gordon sand, is not the decline in rock pressure in the wells drilled accompanied by a corresponding decrease in the unoperated leases? Or, to express it another way: Does not the decline in rock pressure in that field affect the unoperated territory in the same field?

A. It probably would, under certain conditions that might exist.

Q. Under ordinary conditions, wouldn't you find practically the same rock pressure in drilling a certain lease that has existed, and does exist, in operated territory adjoining, providing only it is the same sand?

A. Not always. It depends on how closely the wells are drilled on the adjoining property and on the nature of the sand, its
650 porosity or hardness. In some instances, wells will be affected for some considerable distance, and others for a much lesser distance. The only way to determine definitely what effect the drilling of wells has on adjacent territory is by actual gauge of wells drilled, to determine what the effect has been.

Q. I understand that in as large a business as the natural gas business there are always variations——

A. A great many of them.

Q. But, speaking as a general rule, is it not the constant tendency of the rock pressure to equalize itself throughout a fairly well operated field?

A. It is, where the wells are drilled close enough together to cause that condition to exist.

Q. So that in a territory located in that field, has the gas decreased whether it is operated or not?

A. That is the case under the conditions that I cited,—if the rock is sufficiently porous so that the gas from one well takes the gas from what might be called unoperated territory, then the pressure under that territory declines. If it is not sufficiently porous so that the gas is taken from under the unoperated territory, then it is not affected.

Q. Then is it not entirely possible, if not a frequent occurrence, for a leasehold held within a developed territory, but without operation on that particular leasehold, to become practically valueless, by being held too long?

651 A. It is impossible to determine that until after a well is drilled on it. It might have been valueless, it might have been dry territory before any wells are drilled. There is no way I know of determining whether gas, or production, will be obtained on a certain leasehold without drilling it.

Q. But, as a practical proposition, the attempt to hold or reserve territory within a well developed field is dangerous from the standpoint I have mentioned, is it not?

A. As a practical proposition, I would say it is advisable for a gas company which is operating in territory where other companies are conducting operations to drill up that territory and get their share of the gas as soon as it can do so. The chances of its being interfered with and taken by other companies are very great.

Q. In referring to the taking by other companies, you mean withdrawal of the gas to operations on the adjoining lands?

A. I do, where they are drilled in close proximity to the lands of the other holders in that vicinity.

Q. You mentioned securities held by the Hope Natural Gas Company in other companies to the extent of $3,141,010; in what companies are those securities held?

Mr. Eagleson: The complainants object to this question,
652 on the ground that it is too indefinite and does not determine whether it comes within the scope of the issues raised by the Bill and Answer; and as incompetent, irrelevant and immaterial.

The Commissioner: Note the objection and let the witness answer.

A. The securities to which I referred in my direct testimony as being owned by the Hope Natural Gas Company are in the Citizens Telephone Company, The Connecting Gas Company, the Reserve Gas Company, and the River Gas Company.

Mr. Steptoe:

Q. What is that Citizens Telephone Company? Where does it operate?

A. I don't know.

Q. What amount of stock of The Connecting Gas Company, Reserve Company and River Company, respectively, is held?

A. Citizens Telephone Company, $10; Connecting Gas Company, $237,500; Reserve Gas Company, $2,887,500; River Gas Company, $16,000.

Q. Will you name for us some of the principal industries or industrial consumers in West Virginia furnished directly by the Hope Company, and where they are located?

653 A. Water Works Station at Parkersburg, West Virginia; the Vitrolite Company of Parkersburg, West Virginia; the Standard Oil Company at Parkersburg, West Virginia; Parkersburg Silk Mill, Parkersburg, West Virginia; Standard Milk Bottling Manufacturing Company, Parkersburg, West Virginia; Parkersburg Machine Company, Parkersburg, West Virginia; Brown Tumbler Company, Parkersburg, West Virginia; Parkersburg Iron and Steel Company, Parkersburg, West Virginia; the Baltimore and Ohio River Shops of the Baltimore & Ohio Railroad Company, at Parkersburg, West Virginia; Peerless Milling Company, Parkersburg, West Virginia; United States Tile Company, Parkersburg, West Virginia; J. J. Crotty & Company, Parkersburg, West Virginia; Kesselman & Company, Parkersburg, West Virginia; General Porcelain Company, Parkersburg, West Virginia; Acme Fishing Tool Company, Parkersburg, West Virginia; J. W. Dudley Sons Company, Parkersburg, West Virginia; Parkersburg Rig & Reel Company, Parkersburg, West Virginia; Parkersburg & Marietta Sand Company, Parkersburg, West Virginia; United States Custom House, Parkersburg, West Virginia.

West Virginia Veneer and Package Company, Williamstown, West Virginia; Fenton Art Glass Company, Williamstown, West Virginia.

Penn Window Glass Company, Pennsboro, West Virginia; Premier Window Glass Company, Pennsboro, West Virginia.

654 Weston Glass Company, situated near Weston, West Virginia; Eureka Pipe Line Company, at different points throughout the field in West Virginia; Independent Glass Company, Sistersville, West Virginia; Sistersville Electric Light & Power Company, Sistersville, West Virginia; the Consolidated Ice Company, Sistersville, West Virginia; United States Post Office, Sistersville, West Virginia; City Water Works, Sistersville, West Virginia; Ohio Valley Refining Company, St. Marys, West Virginia; Western Glass Company, St. Marys, West Virginia; City Water Works, St. Marys,

West Virginia; County Court House, St. Marys, West Virginia; Duquesne Glass Company, Paden City, West Virginia; Paul Wissmach Glass Company, Paden City; Paden City Glass Company, Paden City, West Virginia; Vulcan Iron and Steel Company, Paden City, West Virginia; and Paden City Pottery Company, Paden City, West Virginia. There are numerous other smaller consumers scattered throughout the field, in different districts, which are being supplied,—In the city of Mannington we supply gas to the Bowers Pottery Company; Charles Phillips Tool Company; Mannington Art Glass Company; Mannington School, on Clarksburg Street; the Marion Window Glass Company; Boor and Davis Ice Plant; and the City of Mannington Water Works and Crematory; and there
655 are numerous other smaller customers scattered throughout the field, plants of industrial consumers.

Q. The ones you have given are the principal ones?

A. Those are the principal ones.

Q. With regard to the industrial consumers, you have mentioned as located at Parkersburg, did not that industrial service come to the Hope Company as a part of its acquisition of the Mountain State Gas Company's territory and consumers?

A. I believe that part of it did. I also believe that some of it has been added since the Hope Company acquired the plant at Parkersburg.

Q. Is the same situation true with reference to Sistersville?

A. It is, if that was a part of the property which was acquired from the Mountain State Gas Company, and I am under the impression that it was.

Q. Is the same true with reference to St. Marys and Williamstown?

A. That is true in regard to any of the localities where consumers were being supplied at the time that the Mountain State property was taken over by the Hope Company.

Q. Well, do you know whether St. Marys, Sisterville and Williamstown were points being furnished by the Mountain State?

A. I do not positively know that.

Q. Do you know whether Pennsboro was upon the service
656 lines of the Mountain State?

A. They were not. I know that for the reason that the Hope Natural Gas Company does not supply gas to the domestic consumers in Pennsboro, only to two glass plants there.

Q. What is your information with reference to the service of the industrial companies at Paden City? Is that industrial service a part of the Mountain State?

A. I don't know.

Q. Now, with regard to this industrial service, is the service of gas to industrial consumers wholly undesirable from the standpoint of the gas companies?

Mr. Eagleson: We object to the form of that question.

The Commissioner: Note the objection, and let the witness answer.

A. No, sir.

Mr. Steptoe:

Q. Is not the service and supply of gas to industrial consumers easily accomplished, and cheaply?

Mr. Eagleson: We object to the form of that question, be-
657 cause it is too indefinite; it carries an assumption, and is irrelevant, immaterial and incompetent.

The Commissioner: Note the objection; the witness may answer.

A. I don't understand just what is meant by the question.

(Question repeated.)

A. That all depends upon the location of this consumption; if it is located at a considerable distance from the main lines of the company, and requires the installation of long lines in order to reach it, then it would be neither cheaply nor easily served.

Mr. Steptoe:

Q. No, I meant in the same community. Is it not true that one of the difficulties of domestic service is taking care of the peak load?

A. It is.

Q. Is there any peak load in the service of gas to manufacturers or for industrial purposes?

A. Yes, there is; not so pronounced, however, as in the domestic business.

Q. Doesn't that feature make it easier to supply gas to industrial consumers than to supply to domestic consumers,
658 from the standpoint of the peak load?

A. It does up to the limit of your gas supply. The industrial demand is usually more uniform and the consumption is more regular over the entire year than it is with the domestic consumption. Therefore, if a company had a sufficient amount of gas to meet that demand, the peak load point would not be so high.

Q. If an operating company had its choice between serving industries and serving domestic consumers, would it not be preferable to furnish the industries, providing the prices were the same?

A. In my judgment it would.

Q. You would have a more or less steady call on your lines all the year around?

A. We would have a steadier demand for gas, and could sell practically all of our supply all of the time.

Q. And is it not also true that there would be less expense, in that you would have fewer connections, fewer meters, and fewer consumers?

A. That is probably true, depending on the size and the amount of gas that the companies would require and which the company had to sell.

Q. Now, the Hope Company, as well as the other gas companies, try to supply the industrials whenever they have a surplus for that purpose, does it not?

659 Mr. Eagleston: What other gas companies do you refer to, Mr. Steptoe?

Mr. Steptoe: I will add to the question:

Q. (con.). —I refer now to the operating and producing companies in West Virginia.

A. That is the custom of the Hope Company and, as far as I know, is the custom of other companies, where they have a surplus supply of gas, more than is needed for the requirements of their domestic consumers.

Q. And that is also true, as far as you know, with regard to the Peoples Natural Gas Company, the Fayette County Gas Company and the Manufacturers Light and Heat Company, and the Ohio Cities Gas Company, is it not?

A. As far as my knowledge goes, that is true as to the Peoples Natural Gas Company, the Manufacturers Light and Heat Company and the Fayette County Gas Company; but in so far as it refers,—so far as the question refers to the Ohio Cities Gas Company, I have no knowledge on that subject.

Q. Is the service to industrial consumers advisable or desirable from the standpoint of the company,—gas company?

A. At the present time, and under the existing conditions, in my opinion it is advisable for the gas companies to supply industrial service, and it is desirable that they should do so, providing
660 the consumers can adjust their demands so as to use the surplus gas which the companies may have, that is not required for domestic consumption.

Q. Why is that desirable from the standpoint of the gas company?

A. Because, as I stated in answer to a question a short time ago, in my judgment it is desirable and advisable for the gas companies to find a market for the gas which they have in the fields as early as they possibly can, inasmuch as there is no known way of conserving and saving the gas for future use by domestic consumers.

Q. In comparison with the service to domestic consumers, is the industrial service more or less profitable?

A. I am unable to answer that question, I don't know. At the same price, however, my judgment is that it would be at least equally profitable, if not more so, than the domestic business.

Q. Well, I will put it this way: If no gas were sold at any time to industrial consumers, would the Hope Company be able to supply domestic consumers at the present rates, or as cheaply?

A. They would not.

Q. Please explain that.

A. Because they would have surplus gas at certain seasons of the year, for which they would not have a market, without doing
661 exactly what they did do years ago,—build lines into new territory, and perhaps other States, in order to *to* find a market for their surplus gas.

Q. Then really the domestic consumer gets a benefit from the marketing of gas for industrial purposes out of the surplus in this

respect: That you are enabled to give a lower rate for domestic service by reason of the income and return received from the industrial service?

A. That is probably the case. Of course, if that gas is not being sold for industrial purposes, then we would have to take the domestic business alone and determine what rate it would be necessary to charge in order to earn a return on the investments of the company, and probably the condition you stated in your question would be the case, the rate would be higher.

Q. Are the reasons you have given for your own company the same reasons that urge the other companies to furnish industrial service out of their surplus?

A. I assume that they are, although I am unable to say what the reasons were which influenced the other companies to take that action.

Q. Have you ever estimated the cost of transportation of the gas per mile, or per any given distance?

A. No, I have not

662 Q. Have not estimates been made by the companies, either in your department or in some other department?

A. I know of no estimates having been made to determine the cost per mile of transporting gas, as there are so many different elements that would enter into that that I don't know how such estimates could be made.

Q. Is there any loss in volume or heat value of the gas by reason of transportation?

A. We generally assume that there is a loss in volume, caused by reason of leakage in lines. I do not know that there is any loss in heat units by reason of transportation.

Q. Is there any loss through friction in the passage of the gas through the lines?

A. I don't think that there is any actual loss of gas by reason of friction. It is merely a loss in pressure which occurs by reason of friction. There may be some little loss in transporting gas by reason of condensation.

Q. Is that the condensation at the pump stations?

A. No, the condensation occurs practically throughout the length of the line. The moisture in the gas actually condenses, and perhaps there is a small loss occasioned by reason of that.

Q. That is by reason of the pressure at which the gas is contained?

A. No, by reason of the condensation of the fluid which

663 comes out of the gas,—water moisture, something of that kind.

Q. Have estimates been made by your company of that loss for any given distance or distances?

A. I know of no such estimates.

Q. Have you ever seen estimates or calculations of the loss in transportation?

A. Yes, I have seen a good many figures of that character, bearing on losses from different causes,—by reason of leakage and condensation, and so forth, but I have no recollection of what they

were. In my opinion, they do not establish anything definitely at all.

Q. Are you able to give us *no* estimate of that loss, say of, transportation for a distance of one hundred miles?

A. No, sir, I have no estimate of that kind at all.

Q. Not even between limits?

A. No, no limits.

Q. Would you say that the farther the gas is transported, the greater the loss from the causes mentioned?

A. I would say that the loss depended almost entirely upon whether a line was tight or whether there was leakage in the line.

Q. Assuming that the condition of the line be uniform throughout, would you then say that the greater the distance the greater the loss in transportation?

A. That would depend entirely on what the condition of
664 the line was. If it was leaking the whole entire length of the line, I would say that the greater the distance was the more the leakage would be; on the other hand, if it was not leaking at all, I don't think it would make any difference.

Q. If it was not leaking at all, you believe it would deliver the same amount that was put into the line at the beginning?

A. I believe that it would eventually lose a small quantity that might be lost by reason of condensation—providing the line was an absolutely tight line.

Q. Well, as a matter of fact, there has not yet been constructed an absolutely tight line from start to finish?

A. No, I have known of no lines that were absolutely tight. However, I do know of one line where it was constructed a distance of about—there was something over a hundred miles in length, and the leakage out of the line over a period of twenty-four hours was less than 25,000 feet of gas, with 300 pounds pressure on the line.

Q. That line was what length?

A. Over a hundred miles in length, I can't give the exact length of mileage. Now, I say that I know that—I know that simply from statements that were made to me by the people that constructed the line and tested it. I might say further on that subject, that
665 the test was made by pumping air into the line up to a pressure of 300 pounds, then shutting the line in and allowing it to stand for twenty-four hours and noting the drop in pressure, then pumping in sufficient air at the end of twenty-four hours to bring it back up to the 300 pounds originally, and it required less than 25,000 feet of gas to bring the line up to 325 pounds pressure. That would not necessarily mean that there was even 25,000 feet of leakage in that line in twenty-four hours, as the temperature conditions would affect it to some extent, either expand or contract the air in the line; but it could not exceed over the 25,000 feet anyway. It might have been less than that, if the variation in temperature conditions were taken into consideration.

Q. While we are speaking of what others say on the subject: If Mr. Joseph Guffey, of the Pittsburgh and West Virginia Gas Company, testified in a recent case that the cost per mile of transportation

was one mill, or five cents a hundred miles, would you be prepared to disagree with him?

A. I would not.

Q. Would you consider that a fair estimate?

A. I have no views on that matter, I don't know whether it is a fair estimate or not.

666 Q. The gas territory of the Hope Company is practically all held under leases, is it not?

A. Practically all of it, I think.

Q. And is that the customary form of lease, which leases both oil and gas?

A. It is. In many instances it leases both the oil and gas; in some cases it covers either one or the other only.

Q. But in the great majority of cases it covers both oil and gas?

A. It does.

Q. And your company is engaged in oil operations, and has been for some years?

A. We are producing some oil. Our principal business is the gas business; but in drilling for gas we have sometimes encountered oil in some particular wells. We are producing that oil.

Q. And isn't your company also engaged in the manufacture of gasoline?

A. We are.

Q. Where are those gasoline manufacturing plants located?

A. In the State of West Virginia.

Q. Are they generally at or near the compressor stations?

A. They are at or near the compressor stations, as a rule.

Q. Can you give us a statement, approximately, of the number of gasoline manufacturing stations your company has?

A. I can furnish that; I would have to look it up.

667 Q. Is your largest gasoline plant at Hastings Station?

A. It is.

Q. I wish you would describe to us briefly the way in which your gas is used at that station in the process of manufacturing gasoline.

A. I know very little about that process, for the reason that I have never been to those gasoline plants—to more than three or four of those gasoline plants, and only once or twice at that. About the only thing I do know about it is that the gas is allowed to flow through a body of oil. This oil absorbs the gasoline in the gas, and then that oil is treated in a still, and the gasoline taken out of the oil.

Q. Does all of the gas passing through the Hastings compressor station go through that process?

A. The principal part of it does. There may be a little that does not. I am not positive as to that. It may all go through.

Q. Does that same thing take place at the other compressor stations through which your gas is fed?

A. It does at those points where the gasoline stations are installed.

Q. Well, I wanted to ascertain if practically all of the gas of the company, at one station or another, did not go through that process?

668 A. A very large percentage of it does.

Q. Could you be more definite than "a very large percentage"?

A. Why, I would say that approximately ninety or ninety-five per cent of the gas handled by the company goes through the gasoline treating process.

Q. In your examination in chief you testified at considerable length, and with considerable detail, as to the discovery, development and operation of gas fields and their decline. In order to be brief on the subject, I direct your attention to Paragraph III of the Answer of the State of West Virginia in the case of Pennsylvania against West Virginia, and will ask you to read beginning at the second paragraph on page 3 down to the second paragraph on page 4, and tell us if that is not a fair condensed general statement of what has always happened in the past and what can be expected to happen in the future with reference to natural gas fields?

In order to get the matter upon this record, as to the precise portion of the Answer to which I refer, I read it as follows:

"Natural gas (hereinafter called gas) is produced by the drilling of wells into gas containing strata or sands in the earth. The known fields in and from which gas is derived are comparatively few and restricted in area. As the number of gas wells drilled in any field increases and the time during which the extraction of gas
669 therefrom lengthens, the volume of the gas and the natural rock pressure, upon which the output depends, gradually diminish not only in the individual wells, but also in the entire field. The constant tendency, therefore, is in the direction of depletion of the field and exhaustion of the gas supply therefrom. And while for a considerable period the aggregate quantity of gas produced from a specific field may be increased or maintained at substantial uniformity, this can only be accomplished by the drilling of new wells, the added extraction of gas from which still further accelerates the depletion of the field. For this reason it becomes necessary to sustain the output by exploration for new gas territory, and the development thereof when discovered. But even this extension of territory cannot be continued indefinitely, and the later discovered territories themselves are subjected to the same process of depletion and to the exhaustion of their gas. And so it occurs ultimately that the supply of gas, once adequate to the needs of the population dependent thereon, becomes insufficient for the service of all, and the uses of gas, or the extent of its distribution and consumption, must be correspondingly curtailed. The foregoing was the experience
670 of the States of Pennsylvania, Ohio and Indiana, where the extensive development and utilization of their own gas, and the manifest tendency thereof to exhaustion, preceded the commencement of the transportation of West Virginia gas to other States, hereinafter mentioned. And this experience of Pennsylvania, Ohio and Indiana, now in course of duplication in West Virginia, was well known to the gas companies hereinafter mentioned, before and at the time of the commencement of their business; and it was

equally known to the people of those States for whose consumption the gas from West Virginia was and is so transported, since that gas was and is furnished to them in aid of, or substitution for, the failing or exhausted gas of their own States."

Mr. Young: The question is objected to, as incompetent, irrelevant and immaterial, and not proper cross examination; on the further ground that the question covers several propositions which are not supported by any facts in evidence in the case, and which compels the witness to assert facts of a very general character, and
671 the assumptions are not supported by the evidence and cannot be supported by any facts that could have possibly come to his attention.

The Commissioner: Note the objection, and let the witness answer.

A. I would agree with that portion of the statement on page 3 of the answer if the words in the ninth and tenth lines of the second paragraph, as follows: "but also in the entire field," were stricken out; also, on page 4 of the Answer, if the words on the 17th line, "must be correspondingly curtailed" and all of the balance of the paragraph were stricken out.

Mr. Steptoe:

Q. What exception have you to the statement of the Answer which we have just read, touching the prior experience in the States of Pennsylvania, Ohio and Indiana and the exhaustion of the gas there?

Mr. Young: We object to the question, on the same grounds as stated in the objection to the preceding question.
672 The Commissioner: Note the objection, and take the answer.

A. I don't know that the statements made in the Answer are correct.

Mr. Steptoe:

Q. You mean that you don't know?
A. I do not.
Q. Are you prepared to say that they are not correct?
A. I mean, I don't know.
Q. Do you know whether or not the statement touching the knowledge of these conditions by the gas companies at the time they started the operations in West Virginia is true?

Mr. Young: Objected to, on the same grounds as stated previously.

The Commissioner: Note the objection, and take the answer.

A. I do not.

Mr. Steptoe:

Q. You mean by that, you don't know whether it is true or not?

A. I don't know.

673 Q. With reference to the fact of a shortage in the gas supply upon domestic consumers in the States of Pennsylvania and Ohio, have you any reason to think that the inconvenience and suffering occasioned to the consumers in those States would be any different from the inconvenience and suffering caused to consumers in West Virginia by a like shortage?

A. I have not, if the same conditions existed in West Virginia.

Q. What about the cost of remodeling the houses for the substitution of other fuel? Would the cost, as estimated by you for Pennsylvania, be any less in West Virginia?

A. I believe it would be somewhat less in West Virginia, for the reason that many of the houses were in existence at the time that natural gas was first introduced into the communities, and the growth of many of those towns has not been so very rapid, so that there would not be such a large number of houses constructed since natural gas was introduced; but wherever the conditions were the same, and the houses needed reconstruction, then, in my judgment, the cost would be practically the same in West Virginia as it is in Ohio and in Pennsylvania.

Q. That would be true in the individual instances you have in mind?

A. In individual instances, I would say that there would be

674 no difference; as a whole, there would not be nearly as much reconstruction to do in West Virginia as there would be in the other States, because the number of consumers is very much greater in the States of Ohio and Pennsylvania. It is my belief that the percentage of houses that would have to be reconstructed in proportion to the population would be greater in Ohio and in Pennsylvania than it would in West Virginia.

Q. In case there are one or more communities in West Virginia that have grown up since the development of the gas industry, and have obtained their growth since then, there would be a very large percentage of remodeling?

A. The same condition would exist in West Virginia then as would exist in a similar town in Pennsylvania or in Ohio.

Q. It would depend upon the growth and development of the city since the use of gas became general?

A. That would have an influence, in my opinion, on the conditions existing.

Q. Take the specific example of the city of Clarksburg, which we will assume for the present as having practically quadrupled since the year 1900: What would you say would be the comparative percentage of remodeling there as against towns you have in mind in Pennsylvania?

A. In my opinion, there would be in the city of Clarksburg

675 a large number of houses which might require remodeling to some extent in order to use fuel other than gas. I am under

the impression that there are a good many houses there that are adapted only for the burning of natural gas, and whatever that number is, they would have to be remodeled in order to use other fuel; and I would say that the cost of doing that would be as great in Clarksburg as it would be in other States, any other States.

Q. And the same would be true in regard to any other town,—Fairmont or Morgantown,—in case their development has been since the use of gas became general?

A. In my opinion the same conditions would exist in any town in West Virginia where the conditions were similar to those in the other States.

Q. Did I understand you to say on direct examination that you knew of no other gas fields available to your company?

A. I rather think that I did make that statement. I believe that to be a fact, whether I made the statement or not, I don't recollect definitely.

Q. I believe you also stated that the Hope Company had an existing shortage last winter?

A. I did.

Q. And that you anticipated a shortage for the coming winter?

A. That is a fact.

676 Q. Will that shortage, in your judgment, continue in future years in the absence of the discovery of other fields or other sources of supply than you now foresee?

A. In my judgment, it will.

Q. Will the shortage increase?

A. The amount of available gas will undoubtedly decrease if new sources of supply are not discovered or made available.

Q. Assuming that there are no other fields discovered, then this shortage may be expected to become greater and greater each year?

A. It may be.

Q. Eventually then, the Hope Company will not be able to fulfil its existing contracts, will it?

A. That might become the case.

Q. Wouldn't it necessarily become the case, under the circumstances mentioned?

A. No, for the reason that, as I remember those contracts, the Hope Company is only obligated to supply such gas as it may have, and I know of no reason why the Hope Company could not continue to supply such gas as it may have. While it might not be able to supply sufficient to meet the requirements of the consumers connected to its lines, it can furnish such a supply of gas as it may have.

677 Q. There will then be a decrease to the point where all of your supply will be required by those companies, or certain of them, with such exceptions as are named in the contract, with reference to consumers, domestic consumers of the Hope Company along its line?

A. The supply is all required now, inasmuch as we were unable to give those companies last winter all of the gas that they needed.

Q. Do not certain of those contracts have priority over other contracts?

A. They do.

Q. For example, does not the contract for the supply of the East Ohio Gas Company take precedence over the contract and deliveries called for by the contract with the Fayette County Gas Company?

A. My recollection is that it does.

Q. Then, as your supply decreases to the point where the Hope Company has no more available gas supply than is called for by the contract with the East Ohio Company, there will be no supply for the Fayette County Gas Company, will there?

A. There would not, in accordance with the terms of those contracts, providing that the East Ohio Gas Company had a demand from its domestic consumers at all times sufficient to take the entire amount of gas—surplus gas—which the Hope Company might have after its own consumers were taken care of.

Q. Assuming the conditions you mentioned to exist, the
678 Fayette County Gas Company would receive no supply under its contract, would it?

A. As I understand the contracts, it would not, under a condition of that kind. However, I am not an attorney, and I don't feel that I would care to place an interpretation on the terms of that contract.

Q. Assuming further that we are correct in the construction of those contracts, and that by reason of the demand of the East Ohio Gas Company taking the total available supply of the Hope Company, and there would therefore be no supply for the Fayette County Gas Company, what is to become of the consumers of the Fayette County Gas Company?

Mr. Eagleson: We object to that question, as it is based on an assumption, and is purely speculative, and calls for prophesy.

The Commissioner: Note the objection.

A. I don't know.

Mr. Steptoe:

Q. In your direct examination you speculated somewhat upon what would happen if your company was called on suddenly to supply some of the cities of West Virginia during the
679 winter season. Let me ask you if there is any physical obstacle to your making a connection with the line of some local utility which may be prepared and willing to contract for and take gas on the same basis upon which you are furnishing gas now to the Fayette County Gas Company,—Take, for example, the city of Morgantown?

A. There is no physical difficulty in making a connection of this kind between the lines of the two companies, other than to bring them both to a point where they meet; but unless this connection was made on a line where the pressure on the lines of the Hope Company was greater than it was on the lines of the Morgantown company, then the gas from the lines of the Morgantown company would flow into the lines of the Hope Company. If the pressure on the lines of the Hope Company was greater, and any large quantity of

gas were taken out of or diverted from those lines, it would have the effect of rendering the power in our compressing stations useless and of no benefit for the purposes for which they were intended to be used when our plant was constructed. I think that answers the question.

Q. If the connection was made to the transmission line leading to Uniontown and Connellsville, would not the only result be to divert to the lines of the Morgantown utility the supply which otherwise would go to Uniontown?

680 A. That would depend entirely upon the pressure on the lines of the Morgantown company.

Q. Wouldn't that pressure in the lines of the Morgantown company be regulated or reduced to the proper point by the installation of appliances for that purpose?

A. I know of no appliances that can be installed other than a compressing station that will cause gas to flow from one line into another where the pressure on the receiving line is greater than it is on the delivering line.

Q. Then, if I understand you, there are two conditions under which it would be practicable: One, that the lines of the local utility carry a pressure lower than the lines of the Hope Company through which the connection is made; and the other is the installation of a compressor which would bring about the same relative pressures?

A. That is correct.

Q. And if either of those two methods is adopted, then the only result, and the only way in which the Hope Company is affected, is by the diversion of that much of its supply which otherwise would go to Uniontown and Connellsville and delivered to the Fayette County Gas Company?

A. I would be unable to answer that question, for the reason that I stated before,—I am not an attorney, and I don't know what

681 liabilities might be attached to the Hope Company for supplying gas to the Fayette County Gas Company under our contract with them.

Q. The only objection you see is that it would violate the terms of your contract with the Fayette County Gas Company?

A. Undoubtedly the gas from the lines supplying the Fayette County Gas Company could be delivered to the Morgantown company, providing the necessary lines and appliances were installed for the purpose of conveying and taking the gas.

Q. And if the Hope Company was given a sufficient length of time, say by notice or arrangement, or required during the summer time, that connection could be made with the Morgantown utility without disarranging the Hope Company's lines or its operations?

Mr. Eagleson: We object to that question, because it is incomplete, not containing all the necessary and very material elements that would have to be considered in such a contemplated change, as to the re-adjustment of physical equipment, the financing of the project, and the rates to be obtained thereon, and so forth; and for the further reason that it is incompetent, irrelevant and immaterial.

The Commissioner: Note the objection, and let the witness answer.

682 A. Such a connection could be made, but I am not prepared to say what the effect of that would be on the operation of the Hope Company, and neither do I know what its effect would be in relation to the contract which we have with the Fayette County Gas Company for supplying them with gas.

Mr. Steptoe:

Q. I am not interrogating you, Mr. Sullivan, with regard to the legal situation, but solely with regard to that portion which comes under your knowledge and jurisdiction as a manager of the operations. If the matter of reducing the pressure in the local utility's lines were required to be taken care of by the local utility, and all that was asked of the Hope Company was the making of the connection, could there be any further consequence to the Hope Company in its practical operation than the reducing of the supply which otherwise would go to the Fayette County Gas Company?

A. Yes, there might be a very considerable difference to the Hope Company in making this connection, but, in order to know what that difference would be, it would be necessary to have all of the facts mentioned as to what was required and desired by the Morgantown company. A diversion of a portion of that gas might result in very serious loss to the Hope Company,—A diversion of any of it might result in a very serious loss to the Hope Company. As far as the physical connection between the lines is concerned,
683 that could be made unquestionably, but as to the effect it would have on the operations of the Hope Company, I would have to have more data than you have given me, in order to determine what that would be.

Q. This supply to be furnished would be a supply on the same basis on which you are now supplying the Fayette County Gas Company. Does that enable you to answer the question?

A. The supply of this company that you refer to would be on the same basis as that,—Well, that same basis would not be a satisfactory arrangement to the Hope Company, I can say that much.

Q. That dissatisfaction would arise from the fact of its prior contract with the Fayettte County Gas Company, is that what you refer to?

A. No. We have made contracts in the past which we would not make under any circumstances today, the conditions and circumstances surrounding those contracts being so much different. It would have to be on an entirely different basis than some of the contracts are based on.

Q. Do you have in mind the rates charged the Fayette County Gas Company?

A. I have several matters in mind in connection with that contract.

Q. Right here, let me ask you to give me as briefly as you can: About what is the construction cost per mile of pipe line?

684 A. That varies in accordance to the size of the pipe line, the character of country through which it is being laid. Without more definite specifications, I am unable to answer your question.

Q. Can you give me the average cost of construction per mile of a 10-inch pipe line in West Virginia?

A. I cannot.

Q. Can you approximate it?

A. I cannot offhand. However, I have in mind a certain line which we built in West Virginia last year, upon which I made an estimate of cost at, as I recollect it, about $18,000 per mile, but I also recollect that when the line was completed it exceeded my estimate by a considerable amount.

Q. That cost today is, of course, very considerably more than it has been in prior years?

A. It is. In fact, I might say, doubled.

Mr. Young:

Q. Mr. Sullivan, you didn't state the diameter of the line.

A. 10-inch line.

Mr. Steptoe:

Q. You stated on direct examination that you had estimated the amount which would be required to fulfil the industrial demand in West Virginia, if the full supply to those industries was required to be furnished, under the statute involved in this
685 case. Can you tell me what amount you figured, in making that estimate, for the industrials?

A. I believe I stated it would require between sixty and seventy-five million feet of gas a day.

Q. What industrials did you have in mind in making that estimate?

A. I had in mind the industries connected to our own lines and other industries reasonably close to those lines,—for instance, the industries in Morgantown, West Virginia. The industries at other points, reasonably close to our lines.

Q. You mentioned in your direct examination the Whitaker-Gloeschner Company.

A. I mentioned them as one of the industries located in West Virginia.

Q. Was that company included in your estimate?

A. It was not.

Q. You mentioned the Owens Bottle Company; was that included in that estimate?

A. Yes, sir.

Q. And the Versalli Chemical Company?

A. It was.

Q. What amount did you estimate as the demand of the Owens Bottle Company?

A. I don't recollect at this time just what that amount was for them, I would have to look up the data on that.

686 Q. Would you have to also look up your estimate of the Versalli Chemical Company?

A. I would on practically all the companies, I am unable to keep those things in mind specifically as supplied to each company, I know my totals pretty well.

Q. What did you estimate for the local distributing companies' demands?

A. How do you mean?

Q. The demand of the local distributing companies in West Virginia?

A. Which the Hope Company are supplying?

Q. Yes, sir, the amount that it would be required to supply.

A. That it would be required to supply under the law?

Q. Yes.

A. I can't give you those figures from memory either.

Q. Did you make any estimate for the amounts to be supplied to local distributing companies under your construction of the statute, Mr. Sullivan?

A. I am unable to say just what I included in my estimates, inasmuch as I don't have the data before me.

Q. Do you recall whether you made any estimate for the local and industrial consumers which the Hope Company is now furnishing directly?

A. I did.

Q. Do you know that amount?

A. I don't remember the figures that I used in my estimate.

687 I do know the total amount of gas sold to the Hope domestic and industrial consumers in the year 1919, and I assume that I used the same figures in my estimate so far as the domestic consumers are concerned, and added to them, in the case of industrial consumers, the amount which I had reason to believe they would use if they could get all the gas they desired at all times.

Q. Do I understand that you estimate for all of the present and prospective consumers, taking into consideration your estimate on that basis?

A. I estimated for the present consumers and such prospective consumers as I knew of who might reasonably be expected to apply to the Hope Company for gas. I did not include in that estimate prospective consumers in so far as it would apply to new mills or factories which might be installed.

Q. Did you estimate the amounts which might be required by industrial consumers on the basis of what they would take if they could get all they wanted?

A. I did.

Q. And you also proceeded on the theory that the whole supply would be taken or required to be furnished by your company?

A. Of those consumers that I considered in making my estimate, yes. I did not, however, take into consideration all of the industrial enterprises located in the State of West Virginia.

688 Q. You were also proceeding upon the theory that the several industrial companies considered in your estimate would use natural gas for all purposes?

A. I did.

Q. And the same way with the domestic consumers?

A. Yes, sir. In fact, as far as the domestic consumers are concerned, I figured their requirements at practically what they had been using.

Q. In the past?

A. In the past.

The Commissioner: We will now adjourn and, according to the stipulation heretofore entered into, re-convene on June 28th, 1920, the said stipulation providing that there will be continuous sessions for the two weeks following June 28th. Mr. Sullivan will be examined on re-direct at that time, if counsel for the complainants desire to have further examination on re-direct. It is understood, all parties agreeing thereto, that all notices of such re-convening on the abovementioned date are waived, as heretofore stipulated.

Adjourned until Monday, June 28th, 1920, at 10.00 o'clock, a. m.

ORIGINAL, #20 & #21.

October Term, 1920.

THE COMMONWEALTH OF PENNSYLVANIA

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO

vs.

THE STATE OF WEST VIRGINIA.

Proceedings of June 28th-July 2d, 1920, Inclusive.

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689 Monday, June 28, 1920.

And now, Monday, June 28, 1920, the hour of 10 o'clock, A. M. having arrived, parties met pursuant to adjournment.

Present: The Commissioner, Levi Cooke, Esq.; for the Commonwealth of Pennsylvania, A. Leo Weil, Esq.; for the State of Ohio, Freeman T. Eagleson, Esq.; for the State of West Virginia, Attorney General Edward T. England, Philip R. Steptoe, Esq., and W. S. John, Esq., and Fred O. Blue, Esq.

Without taking any testimony, a recess was taken until 1:30 o'clock, P. M.

690 Monday Afternoon, June 28, 1920.

And now, the hour of 1:30 o'clock, P. M., having arrived, hearing resumed pursuant to adjournment.

T. O. SULLIVAN recalled.

Mr. Weil:

Q. Mr. Sullivan, I understood you to call our attention to certain inaccuracies in your testimony, which you wanted an opportunity to correct, about which you have made investigations since testifying; and I want to have you make whatever corrections you think proper,

so as to make your testimony conform to the facts as you now learn them to be. First, I call your attention to the fact that you made a statement that the lines of the Hope Natural Gas Company delivering gas to the East Ohio Natural Gas Company and the Peoples Natural Gas Company, ended a short distance over the state line in which those companies were doing business. I wish you would state what the facts are, with reference to that situation.

691 A. I find that while those lines were originally built by the Hope Company to the points I described, they were later charged back against the respective companies. I was not aware of this having been done at the time that I testified. Therefore, the connection between the lines of the Hope Company and the other companies, to which it is delivering gas, is at the state line, or as nearly to the state line, as we can determine.

Q. When you say the state lines, you mean that the deliveries are made at the state line on the West Virginia or the Ohio side?

A. I mean that the connection between the lines of the companies is made at the state line between the states. The measurement of the gas, in the case of the Ohio Company, is made on the West Virginia side of the river, and in the case of the Peoples Company, it is made in West Virginia at, I believe, three different points, and one point in Pennsylvania.

Q. Now you stated in your examination that the gas delivered to the Peoples Company through the pipe lines entering the State of Pennsylvania, in the southwest corner of Greene County, was measured at Brave Station. Have you investigated that, and what do you find the fact to be, with reference to that statement?

692 A. I have investigated it, and I find that the gas delivered to the Peoples Company through that line is measured at a place called Glover, in the State of West Virginia, a few miles south of the state line. I was aware of this fact at the time I testified, but simply was mistaken in testifying as to that.

Q. You also stated in your examination that the gas delivered to the East Ohio Company through the lines crossing the river near Clarington was measured in the State of Ohio. Have you investigated that further, and what are the facts with reference to that?

A. I have, and I find that the gas delivered to the East Ohio Company, through the lines crossing the Ohio River near Clarington, Ohio, is measured in the State of West Virginia. I never knew this until since I testified I looked the matter up. I was always under the impression that that measuring station was located in Ohio.

Q. Well, you have investigated it, and the facts that you state now you know to be the situation?

A. That is the situation, according to investigations that I made, and the best information that I can obtain.

Q. As general manager of the Hope Company, how long has it been since you have been over all of the lines of the com-

693 pany?

A. I have never been over all the lines of the company.

Q. These lines that you said were laid at these points, as stated in your original examination, were they not at the time laid under your personal direction?

A. They were—some of them were. Not the lines across the river at Clarington. I think the other lines crossing the river near Moundsville were laid under my direction, and also the lines connecting the Peoples Company and Hope Company were laid under my direction.

Q. And that was some years ago, before you became general manager of the Hope Company?

A. It was.

Q. And the testimony you gave at the last hearing upon these subjects was based upon your recollection of those facts, was it not?

A. Yes, sir. I have no knowledge of those lines having been charged back to the different companies after they were originally constructed.

Q. And you knew you had constructed them for the Hope Company, and built them to the points that you stated in your original examination?

A. Yes, sir. I also testified that the lines of the Hope Company delivering gas to the River Gas Company ended in the State
694 of Ohio. From the best information that I can obtain since testifying, I find that I was mistaken in this, and that the lines of this company also end at the state line, and connect with the lines of the River Gas Company at that point, the same as the lines of the other companies connect—at the state line.

Q. Now, on pages 414, 419, 427, 433, 474, 511 and 585, the East Ohio Natural Gas Company is named. Do you not mean by that the East Ohio Gas Company?

A. I do.

Q. The East Ohio Gas Company.

A. Yes, sir; I think, however, that I did mention it as the East Ohio Natural Gas Company, but I referred to the East Ohio Gas Company in all cases.

Q. The real name of the company is the East Ohio Gas Company?

A. It is.

Q. And not the East Ohio Natural Gas Company?

A. No, sir.

Q. And wherever you say East Ohio Natural Gas Company you mean by that the East Ohio Gas Company?

A. I do.

695 Q. On page 424, of your testimony, you stated, "A. I believe about 49 per cent, according to the best information I have." That is the beginning of the statement, and then you say: "The Standard interests own 51 per cent and the other interests own 49 per cent of the Reserve Gas Company." Do you not mean by that that the Standard interests own 50 per cent and one additional share, instead of 51 per cent of the stock?

A. I am now informed that that is the case. I did not know that, however, when I testified; I simply knew that it was in the neighborhood of 49 per cent to one company and 51 per cent to the other company. I am now informed that the Standard Oil Company owns 50 per cent, plus one share, of the Reserve Gas Company, and the Union Natural Gas Corporation owns 50 per cent, less one share.

Q. On page 529 of the typewritten copy (and all of these pages which I have given you refer to the typewritten copy of the testi-

mony) you state—referring to your previous testimony of deliveries by the Hope to the Peoples Company: "Those are the only two points that it delivers gas to the Peoples Company." What do you find the facts to be, with reference to this statement?

696 A. I find that there are four points where gas is delivered to the Peoples Company. In fact, there are five points where gas is measured to the Peoples Company, but some of that gas is delivered into the same line in the State of West Virginia that the gas passing through Glover station is. In other words, it is a connection into the same line,—measuring gas from wells along that line, before it enters the State of Pennsylvania. There are two other points besides the two principal points that I testified to, where there are small quantities of gas delivered to the Peoples Gas Company through lines crossing the state line between the states and monnecting into the Peoples lines in the State of Pennsylvania; the ownership of those lines—the division in the ownership of those lines—being made at the state line, the same as in the other cases.

Q. On page 442, you were asked what communities the Reserve Gas Company supplies, and you answered; "It supplies a scattered number of consumers through the State of West Virginia, and sells its gas to the Union Natural Gas Company, at Canton, Ohio."

A. At Canton, Ohio?

Q. Yes.

697 A. Well, that is wrong.

Q. I am reading now from the record. Now, is that what you said, as to the name of the place—Canton, Ohio, and what are the facts with reference to the communities that are served by the Reserve Company?

A. If I said Canton, Ohio, I named the wrong place. That gas is sold to the Union Natural Gas Corporation, at a point called Sugar Grove, Ohio. The Reserve Company does sell gas to scattered consumers in the State of West Virginia; there are some one or two small towns that they supply, Wilsonburg, I believe, being the principal one of those towns.

Q. Does it sell gas to the Hope Natural Gas Company?

A. It does.

Q. As well as to the Union Natural Gas Corporation?

A. It does. The Reserve Gas Company sells three-fifths of the gas it produces to the Hope Natural Gas Company, and two-fifths to the Union Natural Gas Corporation, at Sugar Grove, Ohio. The deliveries to the Hope Company are for re-sale by the Hope Company to the Northwestern Ohio Natural Gas Company, for Toledo, at Sugar Grove, Ohio, and partly in the fields of the Reserve Gas Company, for delivery to the general system of the Hope Natural Gas Company in West Virginia.

698 Q. On page 540, you say; "The Reserve Gas Company has sold gas to the Ohio in that section—or sold gas to the Hope Natural Gas Company in that section," the whole answer being, when you were asked, "Where are they connected?"—referring to the connections between the Hope and the Reserve—and you said, "There are connections between the two companies out in the field. While I do not know just exactly where those connections are, my belief

is—my understanding is that they are in Doddridge County, West Virginia. The Reserve Gas Company has sold gas to the Ohio Company in that section—or sold gas to the Hope Natural Gas Company in that section."

A. By the latter part of that answer I meant to correct the part that referred to the Ohio Company—sold gas to the Ohio Company in that section—there being no Ohio Company in that section to sell gas to, and I simply used the wrong term there. I meant to say to the Hope Natural Gas Company in that section; I meant to correct the former part of that statement.

Q. In other words, what you intended to say was that they sold gas to the Hope Natural Gas Company?

A. In that section, yes, sir.

Q. In that section.

699 A. Yes, sir.

Q. And they don't sell any gas in that section to the Ohio Company?

A. No, there is no Ohio Company in that section, that I know of.

Q. On page 610, I think the mistake perhaps is that of the stenographer, where you say that "Gas is delivered into the lines of the Connecting Gas Company, and transported by them and delivered to the Northwestern Oil Natural Gas Company at Sugar Grove, Ohio." You meant by that, and I suppose what you said was, the Northwestern Ohio Natural Gas Company?

A. I meant to say the Northwestern Ohio Natural Gas Company. I may have used the wrong word there.

Q. My attention is called by Mr. Steptoe to this statement, on page 610—and I want to ask you if that is what you intended to say—after giving the amount of gas sales to the Hope Company and to the Northwestern Ohio Natural Gas Company, you continue; "This gas is transported out of the State of Pennsylvania through the lines of the Reserve Gas Company, and consists of gas purchased from the Reserve Gas Company by the Hope Company." Did you intend to say "out of the State of Pennsylvania," or is that correctly stated?

700 A. It is not correct. I meant to say, "is transported out of the State of West Virginia through the lines of the Reserve Gas Company."

Q. Are there any further corrections of your testimony, Mr. Sullivan, which you have observed, and to which I have not called your attention, that you want at this time to make? If so, please state what they are.

A. In testifying in regard to the horsepower of the various compressing stations, I believe that I stated that they range from about 200 horsepower to something over 17,000 horsepower. Since looking the matter up, I find that they range from about 60 horsepower to 22,025 horsepower; the amount of the horsepower in Hastings Station being 22,025, and at one of the smaller stations, Seven Pines, for instance, it is 60 horsepower. I believe that I called attention to my inability to give the horsepower in Hastings Station at the time I testified, and asked to correct it later.

Q. Is there anything further?
A. I know of nothing further now.

Mr. Steptoe:

Q. You spoke of the gas delivered at Sugar Grove awhile ago by the Reserve Gas Company. As a matter of fact, doesn't
701 the Reserve Gas Company cease to transport at the state line, at the Ohio River, and thenceforward it goes through the lines of the Connecting Company?

A. That is correct. The Reserve Gas Company's line connects with the lines of the Connecting Gas Company at the Ohio River, and the Connecting Company transports that gas to Sugar Grove, Ohio, where it is delivered to the other companies, at that point.

Q. And what are those other companies?

A. The Northwestern Ohio Natural Gas Company and the Union Natural Gas Corporation.

(Pennsylvania Exhibit No. 15 shown witness.)

Q. Will you consult your map a moment, filed as Pennsylvania Exhibit No. 15? I call your attention to the fact that according to the map there is no connection between certain lines of the Reserve Gas Company, shown in blue, and situate in Harrison County, West Virginia, with the main system of the Reserve Gas Company originating in Lewis County. Is there any connection between the gas territory and production of the Reserve Gas Company, in Harrison County, and the Reserve's system of pipe lines originating in Lewis County?

702 A. The map doesn't show any connection between the lines of the Reserve Company in Harrison County and those in Lewis County, West Virginia, but the map is made as of December 31, 1917, and I understand that there is now a connection between those two fields; although I don't make that as a positive statement, without looking it up.

Q. Do you know whether or not that connection has been there for a long time, a considerable number of years?

A. According to my information, it has not been there for a long time; it has been put in since this map was made, December 31, 1917.

Q. Prior to the making of this map, what became of the gas production of the Reserve Gas Company in Harrison County? Where was it marketed?

A. I am not familiar with what disposition was made of that gas prior to the connection between those lines; but my general knowledge is that that gas was marketed to the Hope Natural Gas Company.

Q. And disposed of by the Hope Company through its system?

A. Yes, sir.

Q. As a matter of fact, Mr. Sullivan, this map not only does not show the additions or transmission lines since December 31,
703 1917, but does not show any of your distributing lines or suction lines, does it?

A. It does not show any of the additions since December 31, 1917, and neither does it show any of the distributing lines, but it does some of the suction lines. That is, our system is built in such a way that the discharge line leading from one station is a suction line from another station. For instance, taking the lines leading from Harrison County, Lewis County, Doddridge County, and part of Ritchie County. Those lines are all constructed with a view to sending gas up to Hastings Station, and also they are discharge lines from stations located in the southern end of the chain. They are suction lines leading into Hastings Station. In other words, the local stations distributed around through the fields, take the gas from the wells and use it up to a certain pressure, and transport it through the discharge lines to the Hastings line, where it is again taken up and compressed and delivered into the main delivery system of the Hope Company.

Q. That is not confined to Hastings Station, but that is the general rule of the system?

A. There are about three points where that condition exists. At Hastings station, we have both the high and low stage
704 compressors. The low stage compressors are for the purpose of taking the gas from the local fields, which are directly connected into that station, and which reduce the pressure of the local fields to a low point,—one pound, or possibly below that, at times. The high stage compressors are to re-compress the gas from the discharge lines from the other stations. Now that same condition exists at Wright Station, located in Marion County. We have both high and low stage compressors at that point, and they operate practically under the same conditions as the Hastings Station operates under. Then again we have both high and low stage compressors at Craig Station, located in Ritchie County, West Virginia. The gas is delivered from the southern field to that point, and recompressed there and sent out through the lines leading to Parkersburg, West Virginia. At Wright Station, in Marion County, West Virginia, the gas is recompressed there and sent out to the lines of the Manufacturers Light & Heat Company and the Peoples Natural Gas Company. At Hastings Station, that gas is recompressed and delivered to the lines of the East Ohio Gas Company.

Q. Those lines take in some gas from those stations, do they not? For example, from Craig Station on to Schultz Station, are
705 there not suction lines leading in to the main transmission lines?

A. No, not to the best of my knowledgs. The discharge line from Graig Station connects into the suction at Schultz Station, when it is provided, so that it can be by-passed around that station. The second line and the other lines leading south from Schultz Station are suction lines proper for Schultz Station. These lines are connected together—paralleling each other on the map, are connected together, so that the double line for some distance south of Schultz Station can be used as a discharge line from Graig Station. To give you some idea how the plant is constructed, I might say that it is somewhat similar to a railroad system. Switches are provided for passing trains at certain points, and the same thing is provided in a

natural gas system,—connections put in so that the gas can be by-passed from one point to another. Take the case of a railroad, sometimes a double track is built; trains going in one direction go out one track, and in the opposite direction on the other track, but at certain points switches or connections are provided, so that those trains can be switched over in case of emer-
706 gencies. The same thing is true in a natural gas system; certain provision is made for switching the gas through certain lines. But the most efficient way to operate it is the way in which it is designed, just the same as it is with the railroad: the most efficient operation is the way in which the plant is designed; but other provision is made whereby it can be utilized, not so efficiently, but to some advantage in case of emergency.

Q. The precise matter I sought to elicit was how the production along the route through Ritchie and Wood Counties was taken up. That, as I understand it, is through the other lines leading into Schultz station from the south.

A. As a general proposition, it is. Practically all of the gas that we handle goes through some compressing station. There may be some few wells scattered along the line here and there that feed into the line direct, against whatever pressure may be maintained on this line; it being the intention always to get those wells onto the suction to some station as soon as it is feasible to do so.

Q. So that from Schultz Station on, you manage to take care of any gas production you may have along the route?

A. If there are any wells along the route that are not connected to the suction to Schultz Station, then they necessarily feed
707 direct in to the transmission lines leading to Parkersburg.

Q. Now, do those wells have to feed into the transmission lines against the full pressure of that line?

A. They have to feed in against whatever pressure may be maintained on the line.

Q. With reference to the suction lines not shown on your map, are there many of those?

A. A great many.

Q. How do they range in size of pipe?

A. From 8 inches down to 2 inches.

Q. And what are the sizes of the connections made for distributing along the lines?

Mr. Weil: This question is objected to, as not being intelligible to the Court or to the witness, without the question indicating what counsel means by distributing lines; it being already in evidence that there are distributing systems in each one of these communities, which distributing system supplies the consumers in those communities; that there are transmission lines, and in-take lines; and the question should indicate to the witness just what distributing lines the question is directed to.

708 (Question withdrawn.)

Q. What are the sizes of the lines whereby the Hope Company connects with and delivers gas to the several local utilities in West Virginia, to which it sells gas, as described in your prior examina-

tion? I don't care for a statement in detail, but a general statement as to either the average size or the range of sizes.

A. The connection between the lines of the Hope Natural Gas Company and the Manufacturers Light & Heat Company at Morgan station——

Q. If I may interrupt you, Mr. Sullivan, I referred to local utilities.

A. The connection between the lines of the Hope Natural Gas Company and the company that supplies Burnsville, Sutton and Gassaway, and possibly some other towns,—I think the Burnsville Light, Fuel & Power Company—at or near Burnsville, West Virginia, is a three-inch connection at that point. There are several miles of three-inch pipe in the line leading to the towns supplied by this company; and my information is that it increases to a four-inch line as it gets nearer to the towns of Sutton and Gassaway.

709 That is the only local utility that I remember of now, with whom we have any contracts. We may have a connection with one or two others, where we are selling them gas without any regular contracts.

Q. Well, to take two or three—what is the size of the connection with the Clarksburg Light & Heat Company?

A. I can't tell you, I don't know.

Q. Do you happen to know the size of the connection which you stated to be for emergency service with the Monongahela Valley Traction Company, at Fairmont?

A. I do not, from memory, although I have a sketch showing that some place.

Q. Each of those instances would be in lines of the size of at least three inches or greater, would they not?

A. Yes, sir; I think that they are larger than that. My impression is that the connection with the company at Fairmont is a six-inch connection, and I believe it is as large as that to the Clarksburg Light & Heat Company—it may be an eight-inch connection.

Q. Where your distributing lines connect with your transmission system, for the service of several towns—for example, of Mannington—What would be the size of the connection there? And give us a general statement as to the size of such connections.

A. My recollection of the connections at Mannington is that there are two-6-inch connections connecting to the distributing

710 lines in the City of Mannington.

Q. Now, then, with reference generally to the suction lines and the distributing connections not shown on your map: was it, or is it, feasible or practicable to show those lines on the map?

A. It is not, on a map of anywhere near this size. In fact, if you were to attempt to show all of those connections and all of the various lines, it would require a map fully as large as one side of this room, or larger.

Q. And as a matter of fact, those various suction lines and distributing lines in number far exceed the lines shown on the map of the transmission system?

A. I don't just understand what you mean by "far exceed."

Q. Are there more of those lines in the aggregate than of the lines laid down in red on your map?

Mr. Weil: Is this question intended to include various distributing lines laid down in various towns and cities?
Mr. Steptoe: No.

A. I don't understand what the question means.

711 Mr. Steptoe:

Q. I want to know if the number of your suction lines and the number of connections for distribution to the local utilities and to the towns which you serve directly in West Virginia, none of which are shown on this map, would exceed the number of lines which you have shown on the map?

A. I would be unable to answer that question without checking it up. I don't know.

Q. There are, as you have already said, a great number of them?

A. There are a great many suction lines, and of course we have distributing lines in all of the towns where we supply gas; but as to how they would compare with the lines that are shown on the map, I am unable to say.

Q. Does the Hope Natural Gas Company transport any gas except that owned by it?

A. It does not, to my knowledge.

Q. Has it ever transported any gas other than its own?

A. I have no knowledge of its ever having done so.

Q. During your regime as general manager of the Manufacturers' Light & Heat Company, did that company ever transport any gas except that owned by it?

712 A. It did, for a very short time, at one time.

Q. Where?

A. It transported some gas for the Hope Natural Gas Company, from West Virginia, and delivered it to the Peoples Natural Gas Company in Pennsylvania. This was done for a short period of time, while the Peoples Company were constructing a line of their own.

Q. Do you recall the year of that?

A. I do not; I can't remember what year that was.

Q. Well, about how many years ago, as nearly as you can approximate it?

A. I would say about five or six years ago.

Q. I understood you to say that was a mere temporary arrangement?

A. A temporary arrangement, yes, sir.

Q. Does the Hope Company ever exchange gas in this sense: the purchase of gas in the field and the delivery at another point along the line of an equal amount of gas?

A. It does not, to my knowledge.

Q. Nor ever has?

A. I am unable to say that it never has. It never has, as far as I know anything about it.

Q. There are, however, certain exchanges between the companies, are there not—the larger companies?

713 A. I have no knowledge of any exchanges, except in case of emergencies. I have known of cases where one company helped the other out, in case of a broken line, or something of that sort. I know of no cases where it was a permanent arrangement of that kind.

Q. The instance you mention on direct examination, of an exchange between the Hope and the Reserve, for the benefit of Parkersburg, was an emergency such as you mention?

A. It was. In fact, that was not an exchange of gas, that was a connection between the lines of the two companies. One reason for making that connection was that the Hope Company had a well located at such a long distance from its pipe line system that it did not feel justified in laying a line to that well. Therefore, they made an arrangement to sell their gas to the Reserve Gas Company, and at the same time they made an arrangement to buy gas from the Reserve Gas Company for Parkersburg on cold days.

Q. The amounts were not the same?

A. The amounts were not the same, only to this extent, that the Hope Company was not to take any more gas from the lines of the Reserve Company than they delivered to the Reserve Company.

But they were both, the transactions—one was the case where

714 the Hope Company sold gas, and the other was a case where it bought gas from the Reserve Gas Company.

Q. Are there similar transactions between other companies?

A. I know of no similar transaction to that, no.

Q. Do you happen to know about an exchange of gas between the Hope Company and the Hazel Atlas Glass Company, of Clarksburg, or rather the Comet Oil & Gas Company?

A. I do not.

Q. Which produces for the Hazel Atlas?

A. I do not.

Q. You don't know that the Comet Company delivers gas to the Hope Company near Grafton, and that the Hope Company delivers in return an equal amount of gas at the Hazel Atlas plant at Clarksburg?

A. I do not know of any such arrangement. I think it may be quite possible that we have a gas purchase contract with that company, although I am not sure of that. I do know that we have a contract to sell them gas in the vicinity of Clarksburg.

Q. That is, to the Hazel Atlas Glass Company?

A. I am unable to say whether that contract is directly with the Hazel Atlas Glass Company or the Comet Gas—Comet, whatever the name of that company is.

715 Q. But your company does deliver directly to the Hazel Atlas Glass Company's plant, at or near Clarksburg?

A. Not in Clarksburg. We may sell them some gas outside of Clarksburg.

Q. The condition you mentioned about the Hope Company and

the Manufacturers Light & Heat Company transporting no gas except their own, is common to all of the larger companies, is it not?

A. It is. I know of no companies that transport gas for others. Ordinarily, it is not a practical thing to do.

Mr. Weil:

Q. Mr. Sullivan, we have been calling, in the cross examination and in your testimony, these lines extending out to the wells, or which take the gas from the wells into the transmission lines, leading to the compressing stations, suction lines. That term has been used frequently. Isn't the proper phrase or name in the trade for those lines, in-take lines?

A. Yes, sir, I think that is the proper phrase.

Q. Is there any suction applied to those lines?

A. There is not.

716 Q. The compressing stations, or any other stations installed by the companies, exert no suction whatever upon those in-take lines, do they?

A. They do not.

Q. When the gas passes through these in-take lines to the compressor station, the gas is there compressed, so as to move by its own pressure, thus compressed, through the transmission lines?

A. That is correct. The compressing station is simply for the purpose of reducing the pressure in the lines leading to the wells, so as to permit the gas from the wells to flow freely to the compressing station against as low a pressure as can be maintained in the line. But there is no suction exerted on the lines.

Q. Now, Mr. Sullivan, these in-take lines, as to which you have been examined as to the number and so forth, consist of lines, in the first instance, that are connected with each well, do they not? Each well has a line connected to it, to take the gas from that well?

A. It has.

Q. And some of these well lines are run into and connected with the larger lines into which other wells are connected or run, and thus the gas is transmitted to the compressor station?

717 A. Yes, sir.

Q. That constitutes the system, does it not?

A. It does. Each well has a line leading from the well. In some instances, if there is only one well, this line might extend entirely to the compressor station, but if there are a number of wells in that locality, they would no doubt be connected into a larger main line that runs centrally through the territory, so as to take the gas from a number of wells. They are all, however, a part of the in-take system, taking the gas from the wells to the compressor stations.

Q. Now, you were asked about a contract which you described between the Peoples Natural Gas Company and the Manufacturers Light & Heat Company, when you were general manager of the Manufacturers Light & Heat Company, which counsel denominated a contract for the transportation of gas. Isn't it the fact that what that contract consisted of was that the Peoples Natural Gas Company

ran into the lines of the Manufacturers Light & Heat Company a certain quantity of gas, and the Manufacturers Light & Heat Company, at the point at which the delivery was made to the Peoples company, delivered a like number of feet, or the same quan-
718 tity, to the Peoples Natural Gas Company; and the identical gas thus delivered to the Manufacturers Light & Heat Company was not transported, but it was simply an exchange of the same quantity, was it not?

(Question withdrawn.)

Q. You stated in your examination, in reply to counsel for the defendant, that during the time you were general manager of the Manufacturers Light & Heat Company, an agreement was made between the Manufacturers Company and the Peoples Natural Gas Company, by which the Peoples Natural Gas Company delivered to the Manufacturers Company, at some place in West Virginia——

A. The Peoples Company did not deliver any gas to the Manufacturers Light & Heat Company in West Virginia.

Q. Well, then, I misunderstood your answer. Will you state just what that arrangement was then?

A. There was no contract at all covering that matter. In fact, my recollection now is that there was merely a verbal arrangement between Mr. Pew, who was in charge of the Peoples, and the Hope Company's at that time—the arrangement was that the Hope Company would deliver a certain quantity of gas to the Manufacturers Company in West Virginia; in fact, sell them this gas in West
719 Virginia, and in return, that the Manufacturers Light & Heat Company would deliver an equal amount of gas to the Peoples Natural Gas Company in Pennsylvania, selling the gas to the Peoples Company at a certain price; the difference between the two prices, as I recollect, being about five cents per thousand cubic feet. Now, that was a mere temporary arrangement during the time that the Peoples Company were engaged in constructing a line, so as to supply some territory or business that they were unable to take care of, until they got their line constructed.

Q. Then this was not a contract of transportation at all?

A. It wasn't a contract at all of any kind. It was rather——

Q. Well, I know, but it wasn't an agreement. I say "contract"—I mean, verbal contract as well as written. It was not an agreement or arrangement for transportation whatever then, was it?

A. Not for transportation. It was an arrangement to buy and sell at a difference in the two prices, presumed to be sufficient to cover the transportation between the points.

Q. And was, as you say, a temporary arrangement made
720 for the accommodation of the Peoples Company?

A. It was. Now, I say that it may be possible that there was a letter on that passed between Mr. Pew and myself. I am unable to state that definitely, but I know that we considered it just merely a temporary matter at the time—a matter of accommodation more than anything else.

Q. And about how long did it continue, if you can recollect?

A. Oh, I think it was about two months, maybe less than that. I don't think it was any more than that. It was a comparatively short time anyway.

Here an adjournment was taken until Tuesday, June 29, 1920, at 10 o'clock, A. M.

721 Tuesday, June 29, 1920.

And now, Tuesday, June 29, 1920, the hour of 10 o'clock, A. M., having arrived, hearing resumed, pursuant to adjournment.

JOHN B. CORRIN, a witness produced on behalf of Complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Weil:

Q. Mr. Corrin, how long have you been in the natural gas business; and, briefly, give your various experiences?

A. I first was directly connected with the natural gas business in February, 1902, when I started to work for the Hope Natural Gas Company. I started in as the assistant treasurer, after which I became assistant superintendent, afterwards assistant manager and vice president. I also——

Q. That was of the Hope?

A. That is the Hope. I also am manager of the Reserve Gas Company; vice president and manager of the Connecting Gas Company; vice president and manager of the River Gas Company. Also
722 a vice president of the Clarksburg Light & Heat Company. Prior to my employment by these companies, I was connected with the South Penn Oil Company for about twelve years.

Q. In what capacity there?

A. In a clerical capacity, especially looking after their operations and leases and titles.

Q. How long did you say you were with them?

A. Since about—from about 1890 until 1902.

Q. You have been in the oil and natural gas business about thirty years?

A. About thirty years is correct.

Q. And beginning in 1892, with the Hope Company, you were actively interested in natural gas companies?

A. In 1902.

Q. In 1902, I should have said?

A. Yes, sir.

Q. You were actively interested then in natural gas companies?

A. Yes, sir.

Q. In their operation?

A. Yes, sir.

Q. And have been since, and you are now?

A. Yes, sir.

723 Q. Now, taking up your different companies, the companies with which you are interested, in order: You are general manager of the Reserve Natural Gas Company?

A. Yes, sir.

Q. Or is it just the Reserve Gas Company?

A. The Reserve Gas Company.

Q. Briefly state the amount of territory, number of wells, and a general description of the lines of the Reserve Company in West Virginia.

A. The Reserve Gas Company, up to the first of January, 1920, had approximately 750 wells, and approximately 56,000 acres of territory. This territory is located in Harrison, Lewis and Doddridge Counties. They have probably approximately 525 miles of pipe line. These lines are main lines running from the field to the Ohio state line. They have connecting lines connecting up the wells, and several low pressure plants; the general lines that make up a gas company. This gas is transported, the great bulk of it, into the State of Ohio.

(Pennsylvania Exhibit No. 15 shown witness.)

Q. Now, calling your attention to Pennsylvania Exhibit No. 15, are the lines of the Reserve Gas Company indicated upon that map, and if so, in what color?

724 A. Part of the lines are indicated in a green color; not all of them, though. The lines that are shown are part of the main transmission lines, together with some of the gathering lines, but the map is not complete, either for transmission lines or gathering lines.

Q. Were there lines constructed after the date when that map was prepared? I think you will observe that was prepared in 1917.

A. The main transmission lines and the main suction lines were laid after the date when this map was made, but the map does not purport to show the gathering lines that were placed in the ground before or after that date.

Q. What are the main transmission lines, extending from what points, and the sizes thereof?

A. The main transmission lines of the Reserve Gas Company are two 12-inch and one 16-inch, extending from a point called Dry Fork, in Lewis County, to a point in Pleasants County, called Schultz. From Schultz west to the Ohio state line, there are two 16-inch lines. Also, there are lines, a 10-inch, running from the compressor station, called Kennedy, to this Dry Fork, and also a 12-inch line from Camden compressing station, in Lewis County, to Dry Fork.

725 Q. To what points in Ohio or Pennsylvania do the lines of the Reserve Gas Company extend?

A. The lines of the Reserve Gas Company do not extend to Pennsylvania at all, but do extend to the line between the States of West Virginia and Ohio, which is low water mark on the Ohio side of the Ohio River.

Q. And at what points?

A. Well, it is called Boaz, or south of Marietta, probably four miles.

Q. Is that the only point?

A. Yes, sir.

Q. Now, give us in like manner the territory and number of wells and pipe lines of the Connecting Gas Company?

A. The Connecting Gas Company is not a producing company at all. It owns no territory and owns no wells. It is merely a transporting company, transporting gas produced by the Reserve Gas Company from the line between the states of Ohio and West Virginia, to two points in Ohio, called Sugar Grove and Wheeler, a distance, I would say, of—well, about 120 miles; in that vicinity, according to my recollection.

Q. And from what point in West Virginia? You gave us the point in Ohio, but from what point in West Virginia?

A. From the line dividing the two states; that is, low
726 water mark of the Ohio River, on the Ohio side of the river.

Q. And what is the size of its pipe lines?

A. Two 16-inch lines.

Q. Two 16-inch pipe lines?

A. Yes, sir.

Q. These two lines are parallel, and each extends about 60 miles—do they not?

A. Well, now, I can't give you the exact distance. I believe you are correst in saying 60 miles, approximately 60 miles. Fifty-eight miles I believe is the exact distance.

Q. And that is what you mean by 120 miles of pipe line?

A. Yes, sir.

Q. It is these two lines, parallel, covering about 60 miles?

A. Yes, sir.

Q. Now, then, give us the territory, wells and pipe lines, of the River Company?

A. The River Gas Company, I would say, approximately has about 4,000 acres of territory, and has very few wells——

Q. Now, just a moment. 4,000 acres of territory where?

A. In the State of Ohio, most of it in Washington County. They do not have many wells; in fact, I suppose four or five wells,
727 besides a few little oil wells. It is not primarily a producing company, but is a distributing company, obtaining its gas from gas it purchases in Ohio, and also gas it purchases from the Hope Natural Gas Company, which is transported to it across the Ohio River from West Virginia. Also, the River Gas Company purchases in certain localities more gas than that particular locality can take care of, and that gas is transported back by the River Gas Company into the State of West Virginia, at two or three points.

Q. What towns does it supply?

A. The River Gas Company?

Q. Yes.

A. Marietta, Matamoras and Newport are the principal towns.

Q. Give the states?

A. In the state of Ohio.

Q. They are all in the state of Ohio?

A. They are all in the state of Ohio. All its consumption is supplied in the state of Ohio.

Q. You say that it delivers gas in West Virginia. To whom does it deliver gas there?

A. To the Hope Natural Gas Company.

Q. At what points in West Virginia?

A. At a point near Sistersville, is one point.

Q. In Wetzel County?

728 A. No, sir, in Tyler County. To correct my memory, I would like to look at that. Near Friendly.

Q. What county?

A. That is in Washington County, Ohio. Pardon me. That is in Tyler County too, I believe, but that gas comes across the river from Matamoras in the state of Ohio.

Q. And the gas delivered at Sistersville, or near Sistersville, where does that come from?

A. Well, that comes from the field right directly across the river, in the State of Ohio.

Q. What is it called?

A. Well, we call that the Matamoras Field, too.

Q. Now, as I understand, the Clarksburg Light & Heat Company is a distributing company in the city of Clarksburg?

A. A distributing and producing company, both.

Q. But it has no general distribution system except right in that immediate locality?

A. That is all, Clarksburg and the immediate vicinity.

Q. What is the size of the pipe lines that the River Company has?

A. Well, they are just the ordinary distribution company lines, but they run from 6-inch down to 2-inch.

Q. Well, I mean, its lines where it transports gas and

729 delivers it to the Hope.

A. One of them is a 6-inch, I believe, and the other is a three.

Q. That extends from that Matamoras Field to that point near Sistersville, and the other——

A. Friendly. They also have a line at present across the river near Newport, that we are trying to transport gas now from the state of Ohio into the state of West Virginia.

Q. From what field in Ohio?

A. Well, it really has no field name at all. It is a little open field.

Q. To what point in West Virginia are you preparing to transport it?

A. Well, that would probably go to St. Mary's.

Q. St. Mary's, West Virginia?

A. Yes, sir.

Q. Give us the amount of gas production owned and purchased both, in West Virginia, say the last year, 1919, by the Reserve Company, the Connecting Company and the River Company. I am speaking now of gas produced or purchased in West Virginia.

A. The Reserve Gas Company, during the year 1919, produced

20,911,000,000 feet of gas. They purchased during the
730 same period, 1,267,000,000. The Connecting Gas Company, as I say, is not a producing company, and did not produce any gas in West Virginia. Neither did the River Gas Company produce any gas in West Virginia. All the gas that it secured from West Virginia was through purchase from the Hope Natural Gas Company.

Q. What is the number of consumers of the Reserve, Connecting, and River Companies in each state?

A. The Reserve Gas Company, the total number of consumers was 900. That is the number of consumers all in the State of West Virginia.

Q. All in West Virginia?

A. Yes, sir.

Q. Go ahead.

A. Now, as to the number of consumers of the River Gas Company, I will have to secure that and give it to you.

Q. What about the Connecting Company?

A. They have no consumers at all; it is merely a connecting company.

Q. None either in West Virginia or Ohio?

A. No, sir.

Q. Now the consumers of the Reserve Company in West Virginia—you say there are about 900?

731 A. Yes, sir.

Q. In a general way, who are they and what are they?

A. Well, I have figures showing that 521 are domestic consumers, 53 of them are industrial consumers, and 326 of them are free consumers.

Q. You mean by "free consumers," owners of land, and so forth, or towns that you are compelled to furnish gas to, under your contracts, either for franchises or for leases?

A. Yes, sir.

Q. I think Mr. Sullivan went over the relations between the Reserve Company and the Hope Company, and the deliveries from the Reserve Company to the Hope Company of gas?

A. I didn't hear his testimony.

Q. Well, does the Reserve Company have any such arrangements with the Hope Company, by which it delivers gas to the Hope Company?

A. It has an arrangement whereby it sells a portion of its gas to the Hope Company, either directly in the field, or by delivery to it, at a point called Wheeler, in Ohio.

Q. Where?

A. Wheeler.

732 Q. How much did it deliver to the Hope Company at Wheeler—did you say?

A. Wheeler.

Q. How much did it deliver to the Hope Company at Wheeler, last year, if you remember?

A. I can't tell you, but I can get it for you.

Q. Does the Reserve Company deliver gas to any other gas company?
A. Yes, sir, it delivers gas to the Union Natural Gas Corporation.
Q. Where?
A. At a point called Sugar Grove, in Ohio.
Q. How much did it deliver to the Union last year?
A. I will get those figures.
Q. And did it deliver to any other gas companies?
A. Yes, sir; to the River Gas Company. That is, I mean in this way: that part of the Hope's allotment of gas going through the lines of the Connecting Gas Company was taken by the Hope Natural Gas Company and sold to the River Gas Company.
Q. And you can get that quantity?
A. Yes, sir.

(Memorandum shown witness.)

Q. What towns does the River Gas Company supply with
733 gas? I show you this memorandum, and that may refresh your recollection.
A. Marietta, Matamoras, Newport, Belpre, Stockport, Chester Hill, Amesville, Pennsville, Gravel Bank, Reno, and Fly.
Q. Can you give us, Mr. Corrin, the amount of gas supplied by the Reserve, in the first place, to the Industrial consumers, and the amount to domestic consumers, in each of these states?
A. The Reserve, you say?
Q. Yes. And by the River Gas Company also, in each state.
A. I will obtain these figures and supply them to you later.
Q. Mr. Corrin, did you take part in the organization of the Reserve Gas Company and the Connecting Gas Company, and do you know the purposes and intentions with which those companies were organized, and the purpose particularly for which they were organized, and the territory obtained and lines laid?
A. Yes, sir, I do.
Q. At that time, you were in the employ, as I understand, of the Hope Natural Gas Company?
A. Yes, sir.
Q. Now, you may state, in the first place, who owns the
734 stock of the Reserve Natural Gas Company?
A. The Hope Natural Gas Company owns 50 per cent, plus one share. The Union Gas Corporation owns the balance of the stock.
Q. And who owns the capital of the Connecting?
A. The same ownership exactly.
Q. And who owns the capital of the River?
A. The Standard Oil Company of New Jersey.
Q. The Union Natural Gas Corporation supplies—just generally—what territory with gas?
A. Part of the central and northern part of Ohio.
Q. What large cities?
A. Well, I would say Sandusky, Lorain—There are a great many, probably fifty or sixty cities of that size in Ohio.

Q. Does it supply Toledo?

A. No, sir, the Northwestern Ohio Natural Gas Company supplies Toledo with gas which it secures from the Hope Natural Gas Company from the Connecting lines.

Q. Now, then, what was the purpose of the organization of the Reserve Company and Connecting Gas Company?

Mr. Steptoe: The question is objected to as improper, immaterial and irrelevant.

735 The Commissioner: Let the objection be noted and let the witness answer.

A. Well, we really ought to go back to the beginning, to tell the purpose of it. The South Penn Oil Company was the pioneer operator in West Virginia for oil. At that time West Virginia was a very unsettled country. There were very few towns in West Virginia, of any size at all, and when the South Penn Oil Company went in there, the primary object was to operate for and produce petroleum, but in its operations they got some dry holes, and they got a lot of gas wells, and the great problem was what to do with the gas wells; and some of the smaller operators abandoned those gas wells, but the South Penn Oil Company retained them and held them, and they endeavored to get a market for their gas around West Virginia, and formed a company called—the same owners, the owners of the South Penn—formed a company called the Flaggy Meadow Gas Company, and this company was organized to take over these gas wells and supply these small West Virginia towns, and also to supply the drilling wells and pumping wells. And along about, I will say, 1894—along there—they had accumulated quite a lot of wells
736 on quite a lot of territory; and then the same owners that owned the South Penn and Flaggy Meadow formed the Mountain State Gas Company. This Mountain State Gas Company, the purpose of it was to produce natural gas and supply it to some of the river towns, like Sistersville and Parkersburg, but they found that these gas wells were accumulating so fast, both from the South Penn and the Flaggy Meadow and the Mountain State, that they had to look for some other market, and the Hope Natural Gas Company looked to Ohio and Pennsylvania for a further market. But in the territory that the South Penn Oil Company had acquired, was a lot of territory in Harrison and Lewis Counties, very valuable territory, and at the time they were operating, there was another very heavy operator named T. N. Barnsdall, operating the same section there, and he had drilled quite a lot of territory for oil, and he had found gas, and this territory of Mr. Barnsdall's was interlocked in with the territory of the South Penn Oil Company. And the South Penn Oil Company kept this territory, and in 1898, the Hope Natural Gas Company was formed, and this same territory that the South Penn had was transferred to the Hope Natural Gas Company. I will say that this territory of the Hope interlocked with Mr
737 Barnsdall's territory, and they were both—Mr. Barnsdall had interests in Ohio, supplying gas to quite a number of towns, and so had the Hope Natural Gas Company, through its ownership

of the Northwestern Ohio Natural Gas Company, supplying Toledo; so it was decided to join the interests of the Standard Oil Company and the Barnsdall interests in Harrison and Lewis Counties, join their interests, and form this Reserve Company, and transport gas to Ohio, so that the Standard Oil Company interests would have a share of that gas out of this field, and be transported to Toledo, and the Barnsdall interests would have its share of the gas transported to Ohio, to supply the towns it was supplying and would afterwards secure. The Barnsdall interests were afterwards transferred to the Union Natural Gas Company.

Q. The Union Natural Gas Corporation?

A. The Union Natural Gas Corporation, yes, sir.

Q. Now, is that the end of that?

A. Well, you asked for the purpose of it. That is as near as I can give it to you.

Q. Now, what about the Connecting Gas Company?

A. Well, the Connecting Gas Company was formed by the same interests who formed the Reserve Gas Company, and was
738 intended to transport the gas from the Ohio River, or the division line between the State of Ohio and West Virginia, to these two points in Ohio, one of which is called Sugar Grove, where the Barnsdall interests, or the Union Gas Corporation, was to take its gas. The other point was at Wheeler, where the Standard Oil Company interest was to take its share of gas for transportation to Toledo.

Q. Now, you stated that this was the purpose of the organization. Was this purpose carried out, and has it been carried out since the organization, and in the operation of the companies from that time to the present?

A. It was, and is now.

Mr. Blue: Let the record show an objection to the last preceding two questions, for the reasons last assigned.

The Commissioner: Let the objection be noted.

Mr. Weil:

Q. Did the parties that were then interested in the Northwestern Ohio Natural Gas Company transfer their interest in that company to any other parties?

739 A. Yes, sir.

Q. To whom?

A. As I know it, the people who now own the Ohio Fuel Supply Company—George W. Crawford.

Q. It was transferred then to the Ohio Fuel Supply Company?

A. Yes, sir.

Q. That is the name of the company?

A. Yes, sir.

Q. Which is generally called the Crawford interests?

A. Yes, sir.

Q. I suppose you don't know who the parties are that own the Ohio Fuel Supply Company?

A. No, sir.

Q. When was that transfer made?
A. I can't give you the date.
Q. About—I don't care for the exact date.
A. Oh, I would say that was along about 1910 or 1911.
Q. About ten years ago then?
A. Yes, sir.
Q. And the gas supplied to the Ohio Fuel Supply Company by the Hope is by contract, which has already been introduced in evidence, as I understand, by Mr. Sullivan?

740 A. There is such a contract. I don't know whether it was introduced or not.

Q. I should have said the contract between the Hope and the Northwestern.
A. Yes, sir, that is the way the contract was made, the Hope and the Northwestern.
Q. That has already been introduced in evidence. How much money has the Reserve Gas Company spent in the State of West Virginia, in the development of its territory and the laying of its lines, and so forth?
A. I would like to get those figures and have them correct, which I will.
Q. What is its present investment?

Mr. Steptoe: Objected to.

(Q. (Continuing:) The present investment of the Reserve Gas Company in the State of West Virginia, in territory as well as in lines?

(Objection withdrawn.)

A. My recollection is that it is about $7,000,000, but I can get the figures exactly.

741 Q. And I think you said the connecting gas company has no lines?
A. What?
Q. The Connecting Gas Company, has it any lines in West Virginia?
A. No, sir.
Q. When you are getting those figures, can you also get us the figures of the amount of Money spent in West Virginia by the South Penn Oil Company, in the development of its gas territory?
A. We could get you a close estimate of it, exactly.
Q. Well, that is what I want.
A. We could get you a close estimate of it.
Q. You haven't got that now?
A. No, sir.
Q. You can get that?
A. Yes, sir.
Q. How many compressor stations has the Reserve Gas Company upon its lines?
A. Four.
Q. Where are they located?

A. One of them at Wilsonburg, in Harrison County, the extreme north end of the field. One near West Milford, on the West Fork River, Harrison County, probably four miles from the line
742 between Harrison and Lewis Counties. One that is called Kennedy Station, near the line between Harrison and Lewis Counties; this is located in Lewis County. And one at Camden, near the southern end of the Reserve field, in Lewis County.

Q. What is the capacity of those stations?

A. What do you mean by capacity?

Q. Horse power, compressing horse power.

A. I will get that and give it to you?

Q. In speaking of the——

A. I see our chief engineer has computed the horse power of those stations, and we can give them to you now.

Q. Go ahead.

A. Wilsonburg, 1895; the one near West Milford, 1500; Camden Station, 3200, and Kennedy, 7600.

Q. The Hope Natural Gas Company delivers gas to the East Ohio Natural Gas Company, does it not?

A. Yes, sir.

Q. At what point?

A. Two points. Through lines crossing the Ohio River at a point called Round Bottom, and another point called Clarendon.

Q. Do you know as to what interest owns the East Ohio
743 Natural Gas Company?

A. Yes, sir; the same interests own the East Ohio Natural Gas Company as own the Hope Natural Gas Company.

Q. And when was the East Ohio Natural Gas Comany organized?

A. I haven't got that date here, but I will get it for you.

Q. About when?

A. Well, somewhere about 1898, I would say.

Q. Was that organized as a part of the operations of the Hope Natural Gas Company?

Mr. Steptoe: Objected to, for the reasons already assigned.

The Commissioner: Let the objection be noted.

A. Yes, sir.

Q. For what purpose?

A. It was the outcome of the operations by the South Penn Oil Company and the Hope Natural Gas Company in West Virginia, in an endeavor by these interests to obtain an outlet for the gas that they have secured, and expected to secure in West Virginia, and that they could not secure a market for in West Virginia.

Q. And did the East Ohio Company afford such a market?

A. It did.

744 Q. What towns does it supply?

A. Well, Cleveland is the principal town; and Canton, and Akron, and there are probably thirty or forty other cities in Ohio.

Q. You have charge of the direct operations, as general manager of the Reserve and Connecting Companies, do you not?

A. Yes, sir.

Q. And are familiar with the operation of those lines?
A. Yes, sir.
Q. You are experienced as a natural gas man in the operation of gas lines?
A. Yes, sir.
Q. That has been your business, as I understand, for quite a number of years?
A. Yes, sir.
Q. What would be the effect upon the practical operation of the lines of the Reserve Natural Gas Company, if it were compelled from time to time, especially on the coldest days or periods of winter, to make connections with and supply other public utilities in the State of West Virginia than those with which it had contracts, and for which it had made provisions?

745 Mr. Blue: The State of West Virginia objects to the foregoing question, because it is improper, irrelevant and immaterial.

The Commissioner: Note the objection, and let the witness answer.

A. First, it would be very dangerous. I do not see how it would be possible to operate any gas system of lines if you could not determine the amount of gas that was going to go through those lines and have some person or city, or otherwise, take gas off of the line before it reached your consumers. In addition, you could not retain any of your consumers yourself, because the service that would be rendered would be uncertain and undependable; and in fact, I don't believe that it would be practicable to maintain a gas company if that condition existed.

Q. From your knowledge of the demand for gas in the State of West Virginia at the present time by other public utilities, industrial consumers, domestic consumers, and others in the state of West Virginia, what do you say if their demands and requirements were first fully supplied, as to whether or not you could carry out your
746 contracts and transport the gas produced by you out of the State of West Virginia.

Mr. Blue: The State of West Virginia objects to the foregoing question, because improper, irrelevant and immaterial.

The Commissioner: Note the objection, and let the witness answer.

A. We certainly could not live up to our contracts, and in addition, it would practically make a whole lot of our equipment and lines a lot of junk, without value.

Q. Would the present requirements and demands of domestic, industrial and other consumers in the State of West Virginia, in the coldest periods of the year, be sufficient, practically to take all the gas produced and transported by your company and the other natural gas companies in the state?

Mr. Steptoe: The same objection.

The Commissioner: Note the objection.

A. I don't believe there would be very much left to go
747 through our lines out of the state, if all the demands were met.

Q. What is the variation in demand between the normal demand and what is usually called "peak load"?

A. Well, it depends a great deal on whether you are speaking of domestic or industrial.

Q. I am speaking of domestic.

A. Well, I would say myself it was about six to one.

Q. You mean by that, about 600 per cent?

A. Yes, sir.

Q. And in the industrial, what would you say it was?

A. Well, there isn't a very great deal of change in the industrial, I wouldn't say, from the peak demand. The question of weather may be—The question of business would enter into it more than the question of weather, with the industrial.

Q. Is it a part of your business to keep advised as to the general developments in the natural gas fields of West Virginia, Pennsylvania and Ohio, and of the other states, that would be tributary to the business, the natural gas business, in those states?

A. Yes, sir.

Q. Now, what are the facts as to the knowledge of new fields or not, new gas fields?—whether or not there are any available
748 for supplying the consumption of natural gas in the present territory supplied with natural gas?

A. Well, I know that not only our own companies, the companies with which I am identified, the Hope and the Reserve, but all other companies, are using extreme efforts to find new fields, and have been for the last five or ten years, especially the last five years—They have used every effort, and I don't know of any real field in the last five years that has been discovered that amounts to anything, outside of this McKeesport field,—by any of the companies, that amounted to anything. There has been a gradual decline in all of the fields and all of the sands. In fact, I don't believe that hardly any wells today are capable of producing—except in a small number of cases, low pressure plants—but what the gas is required to be secured by mechanical means. We have used every effort we can, not only on the surface, but by deeper drilling; have gone to extreme depths in an endeavor to get gas at lower levels; and so far have not been very successful.

Q. Are the present fields sufficient to supply the demand for gas that is now being supplied with natural gas, by the respective companies engaged in the business?

749 A. They are not—far from it.

Q. And what was the fact as to your own companies last year, for example, in supplying the demand of your consumers?

A. We were not able to meet the demands of our consumers, or of the people with whom we had contracts.

Q. Was there a large shortage in that year?

A. There was.

Q. And what is the fact as to the coming year, from your knowl-

edge of the available gas supply, as to whether there will be a greater shortage or not?

A. I believe it will be 30 per cent worse next winter than it was last.

Q. That belief is formed, is it, from your knowledge of the fields and the gas supply, and so forth?

A. Yes, sir; and from my observation, and talking with other operators.

Q. Is there any way known to the trade, by which that can be corrected?

A. No, sir; you can't manufacture it at all. You have got to take what is left and put it to the best use possible.

Q. If your gas territory and wells are exhausted, so that you
750 cannot continue the business of supplying natural gas to consumers, what effect would that have upon the value of the plants?

A. The plants would have no value, only for junk purposes.

Q. And what is the estimated value for junk purposes, as compared with the value at which it is carried as an operating concern?

A. Well, in West Virginia plants in certain localities there is a lot of it that would not really pay to take it up at all—better leave it lying in the ground—because the value that you would get from the material that you would redeem would not pay for the cost of redeeming it.

Q. Now, taken as a whole, what is the general estimate of the trade as to the value of the junk or wreckage of the plant, after its gas is exhausted?

A. Well, a plant like the Hope Natural Gas Company plant, or the Reserve Gas Company plant, I don't believe its junk value is one-quarter, as a whole.

Q. Less than 25 per cent?

A. Yes, sir; less than 25 per cent.

Q. What would be the wreckage or junk value of the distributing plants, with which these various transportation or transmission lines are connected? What would they be worth?

A. I don't think they would have any value at all. I don't
751 believe it would ever pay to redeem it.

Q. It would not pay to take up the pipe, you mean?

A. No, sir, it wouldn't pay to take it up.

Q. What has been the practice of your companies of late, as to discouraging industrial consumption?

A. We certainly do not want industrial consumers; that is, any more permanent industrial consumers. There are times when we have a surplus of gas, by reason of competition, and by reason of our price, that we secure for our gas, that we want to sell industrial gas, and have to sell industrial gas. We couldn't live if we didn't sell industrial gas.

Q. Well, do you make contracts for industrial gas now for sale only out of the surplus, after supplying domestic consumers?

A. Yes, sir, it is only the surplus, and subject to shut-off at practically a moment's notice.

Q. What are the facts as to supplying it to those departments of the plant for which other fuel cannot be effectively used?

A. I just don't get your question.

Q. I say, what is the practice of your companies in not supplying it to industrial consumers, except for those units of the plant
752 where other fuel cannot be as effectively used or substituted?

A. We don't care to supply it where they can use other fuel.

Q. And that is the general practice, is it not?

A. Yes, sir.

Q. Of the trade generally, as well as of your companies?

A. Yes, sir.

Q. What proportion of the gas supplied by the natural gas companies at the present time in Pennsylvania is obtained from West Virginia, taking all the companies together?

A. I don't know what the percentage was, by any figures, but I would estimate that three-quarters of the gas used by domestic consumers in Pennsylvania and Ohio comes from West Virginia.

Q. At the present time?

A. Yes, sir.

Q. And how long has that condition existed?

A. Well, the percentage has gotten larger in Ohio probably in the last four years. It is getting larger all of the time.

Q. How about Pennsylvania?

A. I would say the same thing of Pennsylvania.

Q. Mr. Corrin, you have given us the capacity of your
753 various compressor stations, and referred to suction lines. I want to call your attention to that expression, and ask you if, as a matter of fact, the compressors, or the operation of a compressor station, really puts any suction upon the lines in a compressor station from the source of supply?

A. No, sir, not as yet. Two of our stations are double-stage, the Kennedy Station and the Camden Station. That is, the gas flows naturally from the wells up to the station to the first stage pumps, and goes through the first stage pumps to the second stage pumps, but there is no vacuum on any of our wells at the present time.

Q. As to those lines, the proper nomenclature ought to be in-take lines, ought it not?

A. Yes, sir.

Q. Instead of suction lines?

A. That is a much better word for it—in-take lines.

Q. As a matter of fact, the compressor stations, in the operation of the compressors, reduce the pressure on the in-take line, so that more gas can flow into that line, so as to go into the compressors for compression, and thereby transmission into the transmission line?

A. Yes, sir, that is the purpose.

754 Q. That is the principle upon which they are operated?

A. Yes, sir.

Q. And without the operation of these compressors, under the conditions that have existed for a considerable period, the gas could not have been transported the distance it was carried?

A. That is correct. And I would add that were it not for those compressors, there are thousands of wells in West Virginia today that would have been abandoned years ago. It permits the gas to come from the wells and go to market that otherwise would not have gone to market at all.

Q. That is due to the fact, is it not, that the reduction of pressure upon the in-take lines permits the wells to feed into the lines that otherwise could not feed into the lines against a transmission pressure?

A. Yes, sir.

Q. The population in the States of Ohio and Pennsylvania that is supplied with natural gas and uses it for domestic purposes,—are you familiar with the conditions under which the gas is thus consumed?

A. I believe I am.

Q. And will you tell us now, just as graphically as you can, what the effect would be upon those consumers, if from time to time
755 the operation of your lines was interfered with, as you have described by the supplying of gas to other utilities, or industrial consumers, on cold days, in West Virginia, under the provisions of this Act in controversy here?

Mr. Steptoe: West Virginia objects to the foregoing question, because improper, irrelevant and immaterial, and for the further reason that it suggests a construction of the statute which the statute does not bear.

The Commissioner: Note the objection and let the witness answer.

A. I can't imagine how it would be possible for us to retain our consumers at all, if they were going to be subject to that interrupted service; but I don't think that people would be annoyed by the interrupted service. Another thing,—I think it would be extremely dangerous to have interrupted service. It might be that the gas would go off, practically entirely off, and come on again. It might blow up their houses. And the discomforts that people would undergo, I think they would not be annoyed by it and would put it out of their houses. And in addition, I do know there are
756 thousands of houses in this vicinity and other vicinities, that would have to be, as far as the flues are concerned, reconstructed before they could put other fuel in.

Q. What about those houses that were compelled to change the burning appliances simply?—that would not have to change the houses? Would there be a large number of those?

A. Oh, practically every house would have to have a change in appliances.

Q. Do you know what it would cost, in the first place? Of course, you can't tell what it would cost to reconstruct a house, because that depends on the house, but what would be the average cost of the installation of a new system of heating and the taking out of natural gas, if such estimates have been made by your people?

A. Well, I don't know what these estimates are. They have been made. But I do know, depending on the size of the house, it would

be a very great hardship on everybody, and a very expensive thing to carry out. I don't know what their estimates have been, but I know in my own home, which is an ordinary sized home of about ten rooms, it would cost me—I couldn't do it for less than four or five hundred dollars.

Q. At the time these companies were organized for the pur-
757 pose of disposing of this gas outside of the state of West Virginia, that had been developed as you have described, was there any other way at that time of disposing of that gas?

A. No, sir, there was not. They had used every effort,—every town that they could get in West Virginia was being supplied. They were supplying all the industries that there were to be supplied, and these wells were being drilled continuously in a search for oil, and were either being shut in or being abandoned, and that was the only way they had to dispose of this gas—was to look for some market outside of the state, which they did.

Q. What would be the effect upon the field if operators not having a market for their gas had allowed the gas to escape from their wells?

A. Well, that was shown in a number of fields. I have in recollection the old Garner field. There were not millions of feet of gas but millions of feet of gas blown into the air, because there was no market for the gas and no pipe line in there.

Q. When was that?

A. That was along in about 1891 or 1892. I know there
758 were billions of feet of gas blown into the air there that could have been saved and transported, if there had been lines to the market for gas. Another thing, I have known of three or four million foot wells being plugged, with a high rock pressure, because there was no use for the gas and no place for it.

Q. And the wells abandoned?

A. The wells abandoned and plugged.

Q. How far will the escaping gas from an open well affect other wells in the same territory?

A. Well, I have known of a well—Let's see—five miles and a half away being affected by other wells; not blowing into the air, but being used into other lines—Over five miles.

Q. For five miles.

A. Yes, sir.

Q. You have had the personal experience with that distance?

A. Yes, sir, I have, and watched the pressure.

Q. And I suppose it varies?

A. Yes, sir; it depends on the sand entirely, the nature of the sand.

Q. What is the universal practice of the trade, the custom of the trade, after gas wells have been drilled in, where that field
759 was tapped by other operators, as to finding a market and using the gas from that field?

A. Well, I can answer that by our own methods. We divide our wells into four classes: The strictly competitive wells, we have instructions for our men to use all of the time. There are other wells, in the second class, that they don't turn on, or didn't use to turn on,

until they had used up the first wells. In other words, they use the most competitive wells most of the time, and it would just depend on the location of them—the more competition the more they are used.

Q. What is the third class?

A. Well, the third class are those wells that are more reasonably protected, or inside wells, you might say. And the fourth class wells are those that are absolutely protected from competition. Of course, that classification don't amount to every much in the winter months, because we have to use everything we have got anyway and would like to use more.

Q. At the time that you were connected with the South Penn Oil Company, the operations of the South Penn were intended primarily for the development of oil, were they not?

A. Yes, sir, it was.

760 Q. It was not undertaken as a gas development proposition?

A. No, sir; at that time a gas well, when they struck it, was worse than a dry hole, because it was harder to take care of, and they didn't know what to do with it.

Q. And it was only after this gas had been developed in this way by the South Penn Oil Company that it was found necessary to make some provision for disposing of that gas?

A. Yes, sir.

Q. And did the South Penn Oil Company go to any considerable outlays or expenses in undertaking to find a means of disposing of this gas?

A. The South Penn Oil Company did not go to great expenditures itself directly, but the people who owned the stock of the South Penn Oil Company did, by reason of their organization of the Flaggy Meadow Company, the Mountain State, the Hope and the other companies. And, I would also add, the East Ohio and the Peoples Gas Company.

Q. What was the understanding of the trade at that time in the development of oil and gas territory, as to its being necessary to take out the gas, in order to obtain the oil from certain territory?

A. That was customary at the time, to blow the wells to get the pressure off and sand, so the wells would produce more oil.

761 In fact, I have known of wells flowing as high as 20,000,000 feet of gas to get four or five barrels of oil.

Q. And that was the practice in those days?

A. That was the practice in those days.

Q. In those early days?

A. Yes, sir; it was.

Q. Wasn't that the practice generally throughout the whole oil and gas development area of the country?

A. Yes, sir, it was.

Q. These companies which you have mentioned were, to a considerable extent, were they not, the pioneers that invested millions, and tens and hundreds of millions of dollars in finding markets for and the use of this gas that was being developed at that time in the State of West Virginia?

Mr. Steptoe: Objected to as leading.

The Commissioner: Note the objection and let the witness answer.

A. They certainly were the pioneers, there is no question about it; and if it hadn't been for these companies, or companies
762 similar to them, with a good backing of capital, why, I don't think that West Virginia would have been advanced to where it is today. In fact, I think they are responsible for the advancement of West Virginia twenty-five years. As a sample of that, when I first started to work for the South Penn Oil Company, over 90 per cent of the land, the titles to which were examined, had liens of some kind against it. Today there isn't one per cent, in the oil and gas counties.

Q. Mr. Corrin, in the testimony of Mr. Sullivan, we put in evidence a number of contracts, including the contract between the Hope and the Peoples, the Hope and the Northwestern, the Hope and the East Ohio, and other contracts. Before those contracts were made, did the Hope Company, and subsequently the Reserve, supply any of those companies with gas?

A. Yes, sir, they did. They did it under——

Q. And that was true as between substantially all of them?

A. Yes, sir. Part of them by verbal arrangement—and practically all of them.

Q. How long did that continue, if you can recollect, in a general way?

A. Well, I can't tell you, but there were one or two of them where it lasted for several years.

763 Q. Wasn't that true of all of the companies, except the Manufacturers Light & Heat Company and the Fayette Company?

A. It was. It was true of those companies where the ownership was, you might say, all in all with the producing company. In other words, it was a kind of a joint ownership between the East Ohio and the Hope and the Peoples and the River, and such companies as that—looked upon a good deal as doing business with brothers.

Q. Doing business with themselves, under another name?

A. Yes, sir.

Q. They were looked upon, were they not, as subsidiaries of the same general interest?

A. Yes, sir.

Q. And you say that condition continued for a number of years, until these contracts were finally made?

A. That is true.

Q. And was gas supplied in substantially as great a quantity prior to the making of the contracts as afterwards?

A. Well, I wouldn't say in as great quantities, but all the requirements that were necessary for the distributors.

Q. The fact is, is it not, that the demand for natural gas on all of these companies is continually increasing?

A. Yes, sir, it is. And as we all know, what broke our
764 backs in the gas business was the war. We had accumulated a surplus of wells and a surplus of gas, and this war cut that surplus off, and got us back down to where we were prior.

Q. I wish you would go into that a little more fully, as to what you mean and how the war had that effect?

A. Well, prior to the war, we had to drill a certain number of wells every year, by reason of the demands of land owners, competition, and the requirements of leases, and we drilled many more wells than we had a market for the gas for; and the result was that when the war came on, we had a peak of gas. In fact, up to that time, the great question was how to get rid of our gas. And the war came on, and there was such a demand for the industrial competition that we turned every well we had into the line, and kept it in the line summer and winter, all of the time, supplying industries that helped on war material and in other ways. And we all know there are certain wells that require to be rested. We don't have a chance to rest those wells.

Q. You supplied that fuel to the industries that were engaged in manufacturing material for war purposes, such as munitions and other materials, under the orders of the National Fuel Administration, did you not?

765 A. We did, yes, sir.

Q. During that time, the Federal Government organized a Fuel Administration that undertook to control and regulate the oil and natural gas business, did it not?

A. Yes, sir, they did.

Q. Mr. Requa was the Director of that Department, I believe?

A. He was; and Mr. Gregory, under him, was the man that told us what to do.

Q. And you received your orders from that department?

A. Yes, sir, we did.

Q. As I understood your testimony, your orders were to supply all of these plants with all of the gas you could possibly give them?

A. Yes, sir.

Q. And you did that?

A. We did.

Q. Now, give us a little more fully than you have done, what the effect of that was, as an injury to your production?

A. Well, prior to the war, any good gas company could shut in a great many of its wells and rest its wells up.

Q. What do you mean by that?

A. Well, they should be shut in for a period. There are some wells—I think wells are a great deal like children—have dif-

766 ferent dispositions. Some of them you can treat one way and some another, and there are some wells that if you use them for too long a period, without rest, you practically ruin them. Other wells, the more you use them, why the better it is for them. And I think there were a lot of our wells that we used continuously too long, and while it didn't absolutely ruin our fields, it was a great detriment to the fields. If we had had a chance to rest those wells up during the three years that we did use them continuously, for a month or two at a time, it would have prolonged the life of those wells for a long period, I think.

Q. Since this time have you discovered any new fields, or have

you been able in any way to restore your old fields by proper operations?

A. No, sir, we have not, and I think we have done everything that any companies could do, to extend our fields and our production. As a sample of that, this Reserve Gas Company we speak of took up, on the advice of geologists, probably 75,000 acres in one of the adjoining counties, and we drilled four or five test wells, and we probably spent $300,000, and had to abandon the whole business, because we didn't find any production. That is a sample of what we have done in a number of cases with the other companies.

Q. That has been the practice, has it not, of substantially
767 all the large gas companies?

A. Yes, sir. We have spent, in addition, I would say at least $700,000 in this deep well propaganda, trying to get deeper gas.

Q. What do you mean by "deep well propaganda"?

A. Well, if I used the right word, what I mean is, we drilled wells to extreme depths, in the hope that we would find some sand that they hadn't discovered before.

Q. Some sand at a lower depth?

A. Some sand at a lower depth; yes, sir; having drilled wells to the depth of practically 7,600 feet under the surface, and we probably have drilled at least forty wells to a depth of over 4,200 feet in two different counties.

Q. How much do you say you have expended in that effort?

A. I would say at least $700,000.

Q. Did you get any return from it?

A. Nothing so far to justify the expenditure of the money. We have got some little gas, but nothing to amount to anything.

Q. Where was that money expended, in what fields?

A. The great bulk of it, in Marion, Harrison, Lewis and Gilmer Counties.

Q. In West Virginia?

A. West Virginia.

768 Q. Take the territory owned by the Hope Company and the Reserve Company, with which you are connected: Have they more than enough territory to protect their present operations, drilling operations; and if so, tell us just what the whole situation is.

A. Well, I would say that the Reserve, first, has probably 56,000 acres, and of that 56,000 acres there is probably 51,000 that has wells drilled on it. The other 4,000 acres is territory that it is questionable whether it would pay to drills wells on it. We are paying land owners the equivalent of gas well rental, which is as much as they would get if there was gas already on the farm, and if we would drill it would just make that many more holes in the ground and wouldn't add to the supply. The Hope Company probably has about 1,100,000 acres, the total, and I would say that of that 1,100,000 there is probably 400,000 that is drilled. The balance of 700,000 acres is scattered around through the territory, and it is questionable how good it is. One reason it is being held is that other companies have territory in the vicinity, and in the hope that maybe they will do a

little testing, if they get anything we will be in it. That ter-
769 ritory is being held like the Reserve territory, and we satisfy the land owners by paying them the equivalent of well royalties, and it prolongs the life of the field by protecting the drilled territory with this undrilled territory.

Q. Well, take the developed territory of the Hope Natural Gas Company: state whether or not that has been fully drilled?

A. You mean the drilled territory?

Q. The developed territory, territory that is developed.

A. Well, I would say it was reasonably drilled. There are chances for getting more wells on the tested territory, but it is questionable whether the ultimate amount of gas will be increased by so doing.

Q. And as to the undeveloped territory of the Hope Natural Gas Company, is that being gradually tested by the operations of the Hope and of the other companies?

A. Yes, sir, it is.

Q. How long has that testing process been going on?

A. Well, I don't want anybody to understand that this 700,000 acres of undrilled territory has been held by the company for a number of years in the past. That keeps changing from year to year. There may be a hundred thousand acres surrendered this year, and another hundred thousand acres taken up some place else
770 to replace that, and it keeps changing all of the time.

Q. What is the fact as to the company having its leasors and investigators out all of the time, picking up territory where you think there is any prospect of obtaining gas?

A. They certainly do, and not only that, but we have spent a great deal of money in employing geologists, to endeavor to extend our fields.

Q. Could you give us a rough estimate of about the amount of money you spend every year in those general investigations, both of leasers and investigators and geologists, and so forth, in your search for new fields and new territory?

A. Do you mean in considering the territory we surrender and replace each year?

Q. Yes.

Q. Well, probably $150,000 to $200,000 a year, at least.

Q. You mean, that amount is expended every year?

A. Yes, sir.

Q. And has been for how long?

A. Well, ever since I started to work, which has been a long while ago. I would say over twenty years.

Here a recess was taken until 1:30 o'clock, P. M.

771 Tuesday Afternoon, June 29, 1920.

And now, the hour of 1:30 o'clock, P. M., having arrived, hearing resumed pursuant to adjournment.

JOHN B. CORRIN resumes the stand.

Mr. Weil: Counsel have agreed that pending the production of certain figures which are being prepared in accordance with the understanding this morning, that the cross examination may proceed, and when the data is produced, we will put it in then, so as not to delay the cross examination.

Cross-examination.

Mr. Steptoe:

Q. Mr. Corrin, what is your present position with the Hope Gas Company?

A. I am assistant manager and a vice president.

Q. You have been general manager of the Reserve since some time in the year 1918?

772 A. Yes, sir.

Q. Prior to that date, who was the general manager of the Hope Company?

A. John G. Pew.

Q. And was he at the same time the general manager of the Hope Company?

A. He was.

Q. How long have you been general manager and vice president of the Connecting Company and of the River Company?

A. Since about the middle of 1918.

Q. How long have you been general manager and vice president of the Clarksburg Light & Heat Company?

A. At the same time. The only thing I am of the Clarksburg Light & Heat is a vice president. I haven't got any connection with the management at all.

Q. Had you been connected in any official capacity with the Clarksburg Light & Heat Company before 1918?

A. I believe that I was a director and maybe a vice president,—I will have to look and see.

Q. How many years?

A. My recollection is that I have been connected with the Clarksburg Light & Heat in that way probably four years—That is my recollection.

773 Q. In your testimony in chief, you referred to gas of the Reserve Company being transported into the State of Ohio, at Wheeler and Sugar Grove. Doesn't the line of the Reserve Gas Company stop at the state line, as you testified at another place?

A. Yes, sir, there is a line stops at the state line, between the State of Ohio and the State of West Virginia.

Q. As a matter of fact, you meant it was the gas of the Reserve Gas Company which went through the lines of the Connecting Company, and was delivered at Sugar Grove or Wheeler?

A. That is what I intended to say—What did I say?

Q. I understood you to refer to the Reserve Company transporting into Ohio and delivering at those points.

A. Well, I meant to say that it was the gas of the Reserve Gas Company that went to Sugar Grove and Wheeler, through the lines of the Reserve and Connecting Gas Company.

Q. And at those points there is a division or partition of the total gas, as between the Hope Natural Gas Company, on the one side, and the Union Natural Gas Corporation on the other?

A. You mean, at Wheeler and Sugar Grove?

Q. At one or the other of those two points.

A. That is where the division of the gas is made; yes, sir.

774 Q. That is, in proportion to the interests of those last two companies in the Reserve Gas Company?

A. No, sir, it has not, up to the present time, been proportioned as to the ownership. It has been taken by those two companies there, as the two stations that are out there can take it. You see, the Union Gas Corporation has a station at Sugar Grove, and the Northwestern has a station at Wheeler, and they both pump on those lines, and they take the gas, and it really is not proportioned between them; each station takes what they can get by pulling from those lines.

Q. But there is a division as between the Hope Company and the Union Natural Gas Corporation?

A. Well, there is a division in that way, that each station takes what it can get.

Q. You referred to Kennedy Station on your map, Pennsylvania Exhibit No. 15. Is Kennedy Station shown—Will you look and advise us?

(Pennsylvania Exhibit No. 15 shown witness.)

A. It is.

Q. Is it on this (handing copy of Pensylvania Exhibit No. 15 to witness)?

A. It is not on this. The name is omitted here on this

775 map; the station is shown here, but the name of it is omitted.

Q. By comparison it now appears that the name appears on the original Pennsylvania Exhibit No. 15 offered in evidence, but not upon the purported copy delivered to me. Is that correct?

A. That is correct. I would also add, as I said this morning, this is not a complete map to date, because this only shows three of the stations; it does not show the new station.

Q. And does not show any of the gathering lines or distributing lines?

A. It does not show very many of the gathering lines; it shows a few of the gathering lines.

Q. And none of the distributing lines?

A. No, sir.

Q. Any transportation charges made by the Connecting Gas Company?

A. Yes, sir.

Q. What are those charges?

A. Two and a fourth cents a thousand.

Q. For the entire distance?

A. Yes, sir.

Q. And how is that paid, and by whom?

776 A. Well, that is paid to the Reserve Gas Company.

Q. By whom?

A. Let me see—That is paid to the Connecting Gas Company by the Reserve—That is right; to the Connecting by the Reserve.

Q. You spoke something of some surplus gas occasionally had by the River Gas Company, which was sold to the Hope Company. How is that delivered and to what points?

A. Well, let me explain: The River Gas Company's consumption—distribution—is spread along the Ohio River for quite a distance. Marietta is the principal source of distribution, and up the river is Matamoras. That really has no connection with Marietta at all; the lines are not connected. Now, there is a certain amount of gas being produced in the vicinity of Matamoras, more than sufficient to supply Matamoras. The surplus gas, above what is necessary to supply Matamoras—that is, the vicinity there—is sent back over the river into West Virginia, and that supplies Sistersville and some of the towns in the vicinity of Sistersville with gas.

Q. Are those connections made at the state line like the other connections?

A. The lines are owned by the Hope Gas Company over to the low water mark on the line between Ohio and West Virginia.

777 Q. And if I correctly understand you, there is no pipe line connected from the Matamoras field to the residue of the River Gas Company system?

A. You mean to Marietta?

Q. Yes.

A. No, sir.

Q. And for that reason it is more convenient to sell it to the Hope Company across the river line?

A. Well, it is the way it has always been done. Now, there has been some reason for it, and probably is—better to lay lines than down below.

Q. Do the records of your company show the amount of gas so sent across the river, or sold to the Hope Company, during the calendar year 1919?

A. I can't tell you how far back that gas was measured. It is being measured now, and has been for some time past, but how far back I can't tell you. I will be very glad to give you as far back as I can.

Q. Approximately how many years?

A. I don't believe it is a question of years; it is a question of months.

Q. A question of months?

A. Yes. It is a peculiar arrangement. The Hope Gas
778 Company supplies the River Gas Company with the gas it needs, on a percentage basis. The amount of gas that the River Gas Company sells there, that is, taking the amount it produces and buys,—and that is the way it arrives at the amount the River pays the Hope. That is the reason the gas has never been measured going across the river until comparatively recently.

Q. And your recollection is that that was commenced in the course of the last year?

A. Oh, no. No, that gas has been going over to the river for years, but it has not been measured only during the last few months—I mean, measured at the river. I don't want you to misunderstand me, that gas has only been going back into West Virginia for a few months; it has been going back there for years. It has only been the last few months we have been measuring the gas at the river, to see what amount is going back into West Virginia.

Q. You could give it then only for the period that you have measured?

A. Yes, sir, absolutely.

Q. How does the amount of it compare with the amount delivered by the Hope Company to the River Gas Company?

A. Well, I cannot tell you. I will say there is about a
779 million feet a day going over the river from Ohio to West Virginia. I can say that as an average, without going back. Now, as to the amount, we can arrive at that and let you have the amount that the Hope delivers to the River at that point, if you wish that. We could arrive quite readily at the amount of gas that has gone back into West Virginia from this Matamoras Field by taking what we have produced and what we have purchased, and deduct from that the amount sold at Matamoras, and the balance would be the amount that went back over the river. You can arrive at that very easily.

Q. Could you approximate now the year in which the production in the Matamoras field commenced to be used?

A. You mean, went back into West Virginia?

Q. Yes, sir.

A. Why, I would say it would be quite a number of years back. I can't tell you how far, but we could determine that for you.

Q. You referred to the early conditions, when the South Penn Oil Company was operating in West Virginia. How about the holdings of the South Penn Oil Company at the time of the organization of the Flaggy Meadow Gas Company and the Mountain State
780 Company,—were they extensive?

A. The holdings of the South Penn?

Q. Yes.

A. They were.

Q. Approximately, what number of counties—Or, you might mention the counties in which their chief holdings were?

A. Well, there was Monongalia, Harrison, Marion, Lewis, Doddridge, Wetzel, Marshall, Tyler; they were the principal counties.

Q. Did they have any holdings in Pleasants and Ritchie?

A. They may have had a few in Pleasants and Ritchie, but they were not so important as the others. They were comparatively few, as compared with the others.

Q. And did I understand you to say that the Flaggy Meadow Gas Company and the Mountain State Gas Company were organized with a view to taking care of the gas discovered by the South Penn, and making local service?

A. That was particular to the Flaggy Meadow. The Flaggy Meadow was really organized to take care directly of the gas that the South Penn Oil Company discovered in its operations for oil. And for years, all they supplied was the small towns they could reach, where there was a chance to get consumption, and also sup-
781 plied the drilling wells and pumping wells of the South Penn and other operators in through the different fields.

Q. Were both of those companies owned by the South Penn or by the Standard Oil Company of New Jersey?

A. They were.

Q. Which one?

A. Both of them.

Q. Well, were they owned by the South Penn or the Standard?

A. Well, now, I can't tell you that. I think—My recollection is—in fact, I am only guessing nok—that the Flaggy Meadow was is—in fact, I am only guessing now—that the Flaggy Meadow was New Jersey. That is my recollection.

Q. What pipe line system did the Flaggy Meadow have?

A. Well, they had a system covering, I would estimate, possibly 75 miles of lines, all through their fields where they were operating for oil; and also they had the town of Mannington,—they supplied Mannington and Downs, but most of their lines were scattered through the field to supply drilling wells and pumping wells, both of their own company and other operators.

Q. Didn't they have a line extending, say, from Mannington southwardly into Harrison County, at or near Wilsonburg?
782 A. Well, now, it is possible they had, but I can't tell you without going back twenty years.

Q. Do you know or recall the size of that line?

A. No, I do not. I might just add there.—Most of their lines were either two or three inch lines, as a rule they were two and three inch lines.

Q. Are those lines in use today?

A. A great many of them.

Q. You said the Hope Natural Gas Company took over the Flaggy Meadow, or did you say so?

A. It did; I didn't say so, but it did.

Q. And it took over all of its pipe line systems, of course, as part of it?

A. Pipe lines, yes, sir, and wells.

Q. What about the Mountain State Gas Company,—where did its pipe lines run?

A. The Mountain State Gas Company and the River Gas Company

had territory jointly in West Virginia. That territory was along Wetzel and Tyler, and I believe some in Pleasants County. It supplied the towns of Sistersville and Parkersville with gas. And I think in 1910, the Hope Natural Gas Company purchased the
783 Mountain State Gas Company—Let me see. I am getting a little ahead. Before that, the Mountain State Gas Company took over from the River Gas Company all of the territory holdings of the River Gas Company in West Virginia. Then in 1910, the Hope Natural Gas Company purchased from the Mountain State Gas Company all of its holdings.

Q. Where were the pipe lines and pipe line system of the Mountain State located?

A. Well, it took in the towns of Sistersville, St. Mary's and Parkersburg, and lines extending from those towns back into the fields where they had some wells, and I believe in Tyler and Pleasants, and possibly Ritchie and Wetzel Counties.

Q. Are any of those lines shown on your map, Pennsylvania Exhibit No. 15?

A. I wouldn't be surprised if some of these lines shown here into Sistersville were old Mountain State lines. I wouldn't be positive about that, but I wouldn't be surprised if some of them were old Mountain State lines, one or two of them.

Q. What about the line from Parkersburg to Schultz Station?

A. My recollection is, that is an old Mountain State line.

Q. How about the line from Williamstown over to the
784 Parkersburg line, and then paralleling the Parkersburg line to Schultz Station?

A. I would have to see whether that is a Mountain State, but probably it was.

Q. And the line from Schultz Station to St. Mary's, and along the river from St. Mary's.

A. I don't know, but I would assume, without looking, that that was a Mountain State line.

Q. How about the lines extending from Schultz Station southeastwardly through Ritchie County—two of them?

A. If you want to know about those lines, I can very easily find out where they were, whether they were Mountain State lines.

Q. Then I will be obliged if you will make that investigation.

A. Will you make a memorandum, or let me know, which lines you want?

Q. There were, of course, a number of gathering lines and distributing lines involved in the systems of the Mountain State and the Flaggy Meadow which are not shown on this map?

A. Oh, yes; yes, sir, a lot of them. I would also add that the Mountain State Gas Company had some lines in Harrison County, and in the vicinity of Clarksburg too.

785 Q. As a matter of fact, the Mountain State Gas Company, in so far as concerned its business in Harrison, Lewis, and Doddridge Counties, merged with a local company known as the Westport Oil and Gas Company, did it not?

A. That is true.

Q. And following that transaction, the Mountain State Gas Company did no further business in those three counties?

A. No; I believe that is correct.

Q. I wish you would refer now to your map, Pennsylvania Exhibit No. 15, and tell us the date or year, as near as you can remember, when these various transmission lines were completed,—commencing with the line extending from Hastings Station to Round Bottom?

A. My recollection is that that line was completed in 1902 and 1903.

Q. I observe that there are from Hastings to Brinkmier two lines. Were both of them completed as early as 1902?

A. To be sure of those, I would like you to make a memorandum of those, and let me give you the dates they were completed. We can very easily do it, and they will be accurate.

786 Q. How did the Hope Natural Gas Company take over the gas territory theretofore held by the South Penn—that is to say, the portions that the Flaggy Meadow and the Mountain State did not use?

A. It took the territory,—It took the gas right in those leases by paying one-half the amount of money that the South Penn Oil Company had in each one of those lines. That was the consideration. Then the agreement was that the Hope Gas Company was to stand one-half of the expense in the future for rentals and the cost of paying those rentals. Then there was a working agreement between the two companies, by which any gas well that the South Penn might drill or lease, was to become the property of the Hope Natural Gas Company, by the Hope Natural Gas Company paying the cost of that well; and the same way, if the Hope Company should drill an oil well on any of those leases, on which the Hope owned the gas right, that the South Penn Oil Company should take that oil well and become the owner of that, by paying the cost of that oil well; that is, on this territory that the gas right was transferred by the South Penn to the Hope.

Q. Is that arrangement yet in effect?

787 A. No, sir; only as to those leases which were years ago transferred in that manner. If any leases came under that transfer at that time, wherein the South Penn owned the leasehold rights, and the Hope owned the leasehold gas rights, why, that agreement still is in force, but it is not in force as to any new territory that has been acquired since.

Q. As a matter of fact, the Hope and Reserve Companies both produce oil on their own account?

A. They do.

Q. The larger portion of the territory taken over from the South Penn proved to be gas territory, did it not?

A. No. No, I won't say that. There was some very valuable territory taken over, but there was a whole lot of territory which did not prove productive, which was taken over by the Hope from the South Penn.

Q. I rather meant to say that the percentage of gas territory among the leases was greater than the percentage of oil territory—in acreage?

A. Yes, sir.

Q. That was correct?

A. Yes, sir—because gas is more generally found than oil is.

Q. What became of the Flaggy Meadow Gas Company and
788 the Mountain State Gas Company, after the properties of the two were taken over by the Hope Company?

A. It is my understanding—I am not positive about it, but my understanding is the charters were surrendered. I may be wrong on that, but I know they ceased to do business, anyway.

Q. In your testimony touching the danger to the consumers, where the gas supply is furnished irregularly and interruptedly, you do not mean to confine those dangers to the consumers in Ohio and Pennsylvania, do you?

A. Oh, no, no.

Q. There would be equally as much danger to any consumer in West Virginia, who received the same character of service?

A. Depending on where they were located; but there is more danger in Ohio and Pennsylvania, because there are so many more consumers.

Q. It is a matter then of percentage?

A. And location.

Q. With reference to the cost of reconstruction, is there not as great loss to West Virginia consumers in reconstructing houses as to the others?

A. I would say yes, proportionate to their means, that is.

Q. Did I understand you to say that approximately three-
789 fourths of the domestic consumption of gas in the State of Pennsylvania comes from the State of West Virginia?

A. I would so consider it for all companies. Now, I may be wrong, but that would be my estimate of it.

Q. What percentage of the gas consumed in Pennsylvania for industrial purposes comes from West Virginia?

A. Well, I would say probably the same percentage.

Q. What about the industrial consumption of gas in West Virginia, what proportion of that is gas transported from West Virginia?

A. Transported from West Virginia?

Q. Yes.

A. You mean, which is used in West Virginia?

Q. No, in Ohio, for industrial purposes?

A. I don't believe there is a great deal of gas used for industrial purposes in Ohio that is transported from West Virginia. I think the bulk of the gas that is used in Ohio is used for domestic purposes.

Q. Is there much of the Ohio gas used for industrial consumption in Ohio?

A. I don't think there is a great deal of gas used today in Ohio for industrial purposes. There is some of it, but not as much as
790 there was in the past, by any means.

Q. In some of the testimony, reference was made to the fact that some of the gas delivered by the Reserve Gas Company

ultimately was transported to the State of Indiana. Is that your understanding?

A. Yes, sir, it is.

Q. Was not all that gas used in Indiana for industrial purposes?

A. It may be. I have no knowledge—We have no knowledge of what use the gas is put to, after the Union Gas Corporation takes that gas at Wheeler. It becomes their property then, and they transport it into Indiana, and what they do with it, I can't say.

Q. What is the course of transportation of the gas delivered to the Union Natural Gas Corporation?

A. What is that question, please?

Q. What is the course of transportation to Indiana of this gas delivered to the Union Gas Corporation?

A. The direction, you mean?

Q. Yes, how does it go, through what line?

A. Through the lines of—I believe they call it the Logan Natural Gas, which is a subsidiary of the Union Natural Gas Corporation.

Q. To what towns in Indiana?

A. I believe it goes to Muncie, and Richmond,—that is,
791 part of it does. The bulk of it goes to Dayton, in Ohio.

Q. Did I understand you to say that there is never any suction exerted upon the gas wells by the well lines, by reason of compressors?

A. I don't think you will find that we have a well with a vacuum on the well. There is, you might say,—in the suction, it is just reducing the pressure at the station end of the line, so that the gas from the well can flow more freely. I don't think we have a well down there with a vacuum on it.

Q. That is the theory and principle on which you install your compressors, I understand. But I want to know if, in your experience as a gas man, you have ever found any suction exerted on the wells?

A. Why, there certainly is a suction on wells lots of times. Right in this state here, the great bulk of the wells have suction on them,—in fact, lots of them have a vacuum on them, right in this state, but I don't know of any in West Virginia—I mean, of our wells. There might be some in some other companies.

Q. Is it possible, by means of these compressor stations, to create a vacuum, and use that vacuum to extract gas from the well?

792 A. Yes, sir.

Q. Below atmospheric pressure?

A. Yes, sir.

Q. That can be done by any compressor station, can it?

A. Properly equipped, yes, sir—properly equipped and properly located.

Q. Do I understand you to say that none of the wells of the Hope Company—or none of the compressor stations of the Hope or Reserve Companies, have ever at any time extracted gas by suction from the wells to which the stations are connected?

A. You mean, if we ever had a vacuum on any of our wells?

Q. I think that is the same thing.

A. There may have been cases, but I don't recollect any. There

were one or two cases right out from Clarksburg, there near the old Fair Grounds, that was very close to it, and that is the closest that I recollect of having any.

Q. What do you mean by vacuum? See if we mean the same thing.

A. Well, I mean the pressure is below atmospheric.

Q. And the effect of that would be to draw the gas up out of the well?

A. Exactly.

793 Q. Will the gas business eventually arrive at the point where that suction will have to be exercised,—or, as you call it, a vacuum used?

A. I believe it will, and I believe it is to the good of everybody concerned. It is the proper thing to do. If you don't do that, there will be a whole lot of wells abandoned that should not be abandoned; and if you put a vacuum on it, it may prolong the life of the well for a great many years. It will be a great advantage to the farmers, to the gas companies and to the consumers.

Q. Do you know of any companies that are now using vacuums on their wells?

A. Only by hearsay, and that is—I believe the West Virginia Central,—by hearsay there; I believe they call themselves West Virginia Central or Western Maryland,—whatever their name is; they supply Cumberland and Keyser. I understood they were using vacuums.

Q. Any other companies?

A. Not that I know of. There may be, but to my knowledge.

Q. You referred awhile ago to some cases, as I understood, in Pennsylvania?

A. Yes, sir. The Peoples Gas Company is one of them in

794 Pennsylvania,—I think practically all of the companies operating in this state.

Q. Eventually, you think it will come to that pass in West Virginia likewise?

A. I certainly do. If it doesn't, why there is going to be a lot of good gas wasted that will never be gotten out of the ground. That is the only way to get it.

Q. Where is this Garner gas field located, that you referred to in your direct testimony?

A. In the Meade District and Liberty District, Marshall, and Proctor, Wetzel.

Q. How long ago was it that the wells drilled for oil there struck the gas which was allowed to flow openly?

A. Well, it was, as I recollect, in the years from about 1901 up to about 1904, along that period,—probably later than that. Let me see—No, I don't mean that; I mean 1902 to along 1906. That was the worst period.

Mr. Weil:

Q. You mean, 1902 or 1892?

A. 1892, that is what I am trying to say—1892 to 1896; that is right.

Mr. Steptoe:

Q. No such situation as that has occurred in the course
795 of the last two decades, has it?

A. No, I don't know that there has been an awful lot of gas blown in the air because there were not lines in the vicinity to take care of it. In fact, I believe there has been more gas blown in the air than went into pipe lines in West Virginia.

Q. Was your company at fault in that?

A. The South Penn was, yes.

Q. How many gas wells were turned over to the Hope Company from the South Penn Oil Company, at the inception of the former company?

A. I think I have a memorandum of some of those here (referring to memorandum). I see here, in April, 1899, they acquired eleven wells; April 1, 1902, they acquired 29 wells; April 1, 1902, they acquired of the Flaggy Meadow Gas Company 145 wells; in December, 1902, they acquired from the Parker Oil Company, the stock in which company was owned by the same people as own the Hope Gas Company stock, 20 wells; then from 1902 to 1907, from various purchases from South Penn, the Hope acquired from the South Penn 241 wells; from 1908 to 1910, through various purchases from the South Penn, it acquired 80 more. I see here a note, in April,
796 1910, by purchase from the South Penn, it acquired 97 wells. I could go on with a whole lot more purchases of wells, but that is about the way they acquired their wells.

Q. My question referred to the number taken over at the inception of the Hope Company, but your answer is satisfactory. In your statement that the South Penn Oil Company, the Hope Company and the Reserve Company, were the Pioneers in West Virginia, you did not mean to say that they were the first producers and marketers of gas in West Virginia, did you?

A. No. I think what I said was that I considered the South Penn OiOl Company was the first large pioneer in West Virginia in the producing of oil and the development of West Virginia for oil. And the Hope Gas Company and the Mountain State and Flaggy Meadow were outgrowths from the South Penn Oil Company.

Q. Then you referred to the South Penn Oil Company?

A. To a great extent, and their accumulating these gas wells.

Q. As a matter of fact, other companies were developing, producing and marketing gas in West Virginia, at the time and before the Hope and Reserve were organized, were they not?

797-799 A. I don't know of any to any great extent. I think that the Hope probably was the first large gas company that ever went into the gas business extensively in West Virginia. There were other companies operating there, but in a small way, before that.

Q. There were smaller gas companies prior to that time, but the Hope was the earliest among the larger holders?

A. Yes, sir, it was. It was an outgrowth of this accumulated gas that the South Penn had acquired by its operations.

Q. When was your shortage in supply manifest in the business of the Hope Natural Gas Company?

A. Well, I would say about four years ago—three to four years ago.

Q. Then you mean about the year 1916, or 1917?

A. Along about 1916 or 1917.

Q. Prior to that time, was there no shortage?

A. Well, there were shortages, but local conditions made those shortages,—I mean, on account of not having sufficient pipe line—something of that kind.

Q. Not due to shortage of supply available?

A. No, sir.

Q. How about the Reserve Gas Company? When did this
800 shortage in supply first become manifest?

A. Well, I would say about four years ago.

Q. About the same time?

A. Yes.

Q. Was that before or after the Fuel Administration called on the companies?

A. Well, it was after that—after they had control of them, that the shortage was manifest.

Q. Then we may say that no shortages became manifest with either the Hope or the Reserve Companies, prior to the Fuel Administration calling upon them?

A. Let us make it prior to the war, and I will agree with you—except on account of local conditions, as I say, in the matter of lines, and so forth.

Q. Where was this 75,000 acres experimental territory taken up by the Reserve Gas Company—what county?

A. Barbour?

Q. Has it been surrendered?

A. Every acre has been surrendered that the Reserve had.

Q. Were you present during the taking of the testimony of Mr. Quay?

A. Part of the time.

Q. Do you agree with his suggestions about ultimately
801 confining the use of gas for domestic purposes to lighting and cooking?

A. Well, now, I don't know what he said, but my own ideas are,—if I had the power to do it, nobody would use any gas today in the winter time, except for cooking, lighting and limited heating.

Q. What do you mean by limited heating?

A. Such things as bedrooms and grates for emergency heat—not for general furnace use at all.

Q. Then you would advocate the substitution of other fuel for the heating of the house, other than the kitchen, we will say?

A. In the winter time, by all means.

Q. Now, by winter, do you just mean the three winter months, or a half year?

A. No, sir; I think that from—If I had the power, I would allow no gas to be burned in any furnace from the first of December to the first of May.

Q. Or in any rooms through grates or——

A. No, I say I would allow gas to be used for bedrooms and bathrooms and limited amounts in grates in living rooms, but not in furnaces.

Q. Then how would you equip the house for heating other than the places mentioned?

802 A. Well, that is up to them to do,—that wouldn't be my trouble. There is just a limited amount of gas left, and we have to all realize that. We can use it up in two or three years, or we can extend it over a period of ten or fifteen years, and it is just up to the people what they are going to do with it.

Q. As far as the gas companies are concerned, if they get their price, it isn't very material to them, is it?

A. Oh, yes,—We want our jobs to extend over ten years.

Q. You spoke of using gas for lighting purposes; is that done very largely in the better class houses?

A. Well, that depends on what you mean by the better class houses; but there is a lot of gas used for lighting purposes in a great many of these smaller towns, used for street lighting.

Q. Well, to be specific, do the better class householders use gas for lighting purposes—lighting the house?

A. Well, they do in a great many towns where they don't have electricity. Right here in Pittsburgh, I suppose the majority of the houses are lighted by electricity—better class houses.

Q. Where electric lighting is available, is it not more preferable and more generally used, because of the inconvenience of

803 using gas for lighting purposes?

A. I believe you are correct; yes, sir.

Q. The cracking of the globes, due to variation in service—variation in pressure—and the inconvenience of having to light it by matches, leakages, and so forth, make electric light preferable, does it not?

A. It does, to those who can afford it; but there are a great many people who cannot afford it, and who do use gas for lighting purposes.

Q. Then it resolves itself into this: that gas could be used for cooking purpose and to a limited degree in heating other portions of the dwelling house?

A. In the winter time, yes sir. I might say, including one of the greatest conveniences, that is, gas for hot water heating.

Q. Could you approximate the percentage of the West Virginia gas taken into Pennsylvania—not the percentage, but the amount of West Virginia gas that is taken into Pennsylvania, during the spring, summer and fall months, that is used for industrial purposes in Pennsylvania?

A. No; but I do believe that the majority of the gas brought into

Pennsylvania from West Virginia in the summer months is
804 used for industrial purposes. There is no question about it.

Q. Well, could you approximate the percentage of the amount brought in during those periods that is used for industrial purposes?

A. No; I would be merely guessing, that is all.

Q. Well, could you say whether it is 50 per cent or more?

A. Well, you mean, with all of the companies?—Some companies——

Q. You might answer either or both ways.

A. Well, if I give you an answer, it would be merely a guess, that is all. I would say—speaking strictly of summer gas now, from May until September, inclusive, I would not be surprised if 60 per cent of the gas is used for industrial purposes. I mean, nearly all of these gas companies have gas of their own in the state, which they distribute. Like the Peoples Gas Company, they have a certain amount of gas in their own state; so has the Philadelphia, and I suppose probably 50 or 60 per cent of their gas in the summer time is used for industrial purposes. Now, part of that is their own production, and part is from West Virginia.

Q. You are especially experienced in the matter of leases
805 and rentals, royalties, are you not, Mr. Corrin?

A. I know something about them.

Q. Well, you have been connected with those departments for many years, have you not, in your company and others. What is the customary delay rental in leases?

Mr. Weil: This is objected to as not cross-examination, the witness not having been interrogated on the subject at all. And if the answer is taken upon this and similar questions, the attorneys for the States of Pennsylvania and Ohio will reserve the right to cross-examine the witness upon any of these questions that are thus developed.

The Commissioner: Let the objection be noted and let the witness answer.

A. The customary amount is a dollar an acre a year, except where there are operations on the adjoining farm, where we believe there might a claim for drainage, where we pay rental, which is usually $300 a year on the tract.

806 Mr. Steptoe:

Q. And what is the customary royalty on gas wells?

A. Paid by our company, $300 a year for each well.

Q. Are not the delay rental and royalty figures you have given the maximum?

A. No; they are the maximum and the minimum both that we pay. That is the amount that we pay under all of our leases, that we take ourselves.

Q. In other words, those payments are practically fixed?

A. By us, yes, sir.

Q. Do the other operating companies fix those amounts either at the amounts fixed by your company or thereabouts?
A. Do they have fixed amounts, do you mean?

Mr. Weil: This whole line of investigation, without making objections thereto separately—that is to each question—is objected to, for the same reason as those heretofore given, as not being cross-examination; and the same reservation of right.
The Commissioner: Let the objection be noted and the answer taken.

807 A. As far as I am familiar, and I believe it is customary with all of the larger companies, to have a specified amount for delay rentals, and also a specified stated amount for gas well royalties. I believe in different companies these amounts differ,—and also depending a great deal on the character of the territory.

Mr. Steptoe:

Q. But some well royalty is paid, irrespective of whether the well is a small or large producer of gas?
A. As far as our company is concerned, yes, sir. Also, that amount is continued, unless some separate arrangement is made, after the volume and pressure of the well have declined.
Q. Is it not true in very many of the older leases held by your company, the gas well royalty ranges anywhere from $100 to $150 and $200?
A. Not a great many of them. There were a few, and nearly all of them we voluntarily raised, but those leases were not taken by our company; they were taken by so-called scouters, and purchased by our company.
Q. And those delay rentals and royalty payments are what the land owners receive for their gas, outside of some cases where
808 a bonus is paid when the lease is taken?
A. In nearly all cases, a bonus is paid, and in addition to that, they receive—which is the worst yet—this free gas.
Q. In referring to the benefits conferred upon the farmers by the developments of the gas companies, did you mean to say that the indebtedness against the farmers has been paid out of the perquisites that they received in the rentals and royalties you have just mentioned?
A. We think it had a whole lot to do with it, and in addition, the benefits that they received by selling timber and other local materials, and the work which they obtained from the gas and oil companies. It has had a very material effect.
Q. Well, now, Mr. Corrin, from your knowledge of the West Virginia territory where the chief developments were, do you not recall that the chief benefits, chief money received by the farmers, and the occasion of clearing the titles you have referred to, was largely due to coal operations?
A. No, I won't agree with you—not largely. It may have been

of assistance, but not altogether. I believe that these oil and
809 gas companies have put in at least sixty to seventy-five million dollars in rental money alone in West Virginia, and most of it is still there—in the last twenty years.

Q. Does either the Hope Natural Gas Company or the Reserve Gas Company transport or carry any gas other than that owned by the company?

A. Not to my knowledge. There have been one or two cases where we have bought gas—that is, I mean the Reserve Gas Company bought some gas from the Hope Gas Company, from a well down in Doddridge County. The Hope hadn't any lines anywhere near it, and there was very strong competition, and the Hope didn't have very much territory around it; and connection was made into the Reserve line, and the Reserve bought that gas. Then arrangements were made that a tap should be made on the Reserve lines, and the Hope was privileged to take from the Reserve a certain amount of gas not exceeding the amount of that well that the Hope put into the Reserve lines. But I would say there was hardly any of that gas taken out by the Hope under that contract at all. It was a straight sale of gas and purch

810 Q. More in the nature of an exchange of gas?

A. Well, I wouldn't say it was an exchange of gas. It was a sale and purchase, which was merely to save the waste of gas.

Q. Are similar sales and purchases made between the Hope Company and any of the other companies?

A. I knew of one—I think, of the Comet Oil and Gas Company, over in Harrison County; they had some isolated gas and hadn't any lines in there, and they wanted to sell that gas and buy some from the Hope Company. I think that was done a couple of years ago. Those are the two cases that I can recollect.

Q. Are you correct as to the Comet Oil and Gas Company being in Harrison County?

A. Well, Harrison or Taylor; it is very close to the line between the two counties. It may be in Taylor.

Q. Has the Comet Oil and Gas Company any lines in Harrison County?

A. My recollection is that they have. As I understand it, the Comet is owned practically by the same people as the Hazel Atlas Glass Company, and I believe one of the two companies has some lines in Harrison County, near Clarksburg.

811 Q. The fact is, that the amount taken from the Hope Company in Harrison County goes direct to the glass plant of the Hazel Atlas Glass Company, does it not?

A. Well, now, I can't tell that without looking at that. I know that they were privileged to purchase a certain amount of gas at a higher price—a certain amount not to exceed the amount that we bought from them over in Taylor or Harrison County, whichever it is.

Q. As a matter of fact, it is about the only industrial consumer at or near Clarksburg that gets gas from the Hope Natural Gas Company, directly or indirectly, is it not?

A. I don't believe the Hope Gas Company has any right to sell gas in Clarksburg; I don't think they have any franchise in Clarksburg.

Q. You know of no other industrial consumer that gets gas from them?

A. Yes, there is. There is the National Carbon Works. The Hope Company supplies gas to the National Carbon Works, out near the Dresselli; and then I think there are one or two others like that.

Q. You referred to the holdings of the Clarksburg Light & Heat Company, as being territory in the immediate vicinity of Clarksburg. Do you know of any other territory it has?

812 A. Yes, it has some territory down in Doddridge County, down near Big Isaac or Jarvisville. They have a small compressor station down there.

Q. What becomes of that gas?

A. That gas, I believe, is pumped to Clarksburg.

Q. When was that compressor station put in?

A. I believe this last winter.

Q. Prior to that time, that production on the edge of Doddridge County was not transported to Clarksburg, was it?

A. Part of it was, yes, sir. They had a line there all the time down to that field.

Q. Didn't that production go to Weston?

A. Part of it did, and part to Clarksburg. They had for years a line down in that section.

Q. That territory was a part of the Mountain State holdings turned over to the Clarksburg Light & Heat Company at the time of the merger, was it not?

A. I believe that is correct.

Q. As a matter of fact, that company has acquired no territory——

A. The Clarksburg Light & Heat?

Q. —in the last decade or so, has it?

813 A. Well, they have, in the last two years. They have acquired a considerable amount over there, I understand, in Simpson district and Elk, Harrison, and over in there, I understand that they acquired quite a bit of territory.

Q. What interest, if any, has the Hope, the Reserve or Standard Oil Company of New Jersey, in that concern?

A. The Clarksburg Light & Heat?

Q. Yes, sir.

A. I can't tell you, but I believe the Standard Oil Company of New Jersey has about 51 per cent. I can't tell you whether that is the exact proportion, but I believe it is 51 per cent.

Q. It is a slight majority?

A. Yes, sir, they have a majority of the stock.

Q. It is the only local utility in Clarksburg that you know of, is it not?

A. Well, now, there was another company or two in there, small ones, independent. I have heard of them drilling wells inside of the corporate limits; I don't know what they amounted to. I believe Mr. Lownes has a well or two.

Q. When you return to present certain figures called for in your

direct examination, will you give us the figures to show the following, from the year 1910 to 1919, inclusive:

814 The total acreage of the Reserve Company, developed and undeveloped; the number of wells; the amount of gas produced annually, and the amount purchased annually by the Reserve Gas Company; and the amounts of gas disposed of at the state line to or through the agency of the Connecting Gas Company, to the other companies you have mentioned——

A. Well, that is not disposed of at the state line; it is disposed of over in Ohio, between Wheeler and Sugar Grove. Is that what you mean?

Q. Yes. In other words, the amount disposed of as you testified in chief, to the Union Natural Gas Corporation, the River Gas Company and the Northwestern Ohio Natural Gas Company; also, the gas disposed of by the Reserve Gas Company in the State of West Virginia to its domestic consumers, to its industrial consumers, and the amount used in field service, including the amounts used to run their compressor stations and other field operations?

A. Yes, sir.

Q. Do you know the acreage of gas territory that was turned over by the Flaggy Meadow Gas Company to the Hope Natural Gas Company?

A. I think I have that. (Referring to memorandum.) I believe, before I give you those figures, I believe I recollect
815 that the Flaggy Meadow Gas Company was like a gas division of the South Penn Oil Company. My recollection is, when they drilled a gas well, there was no territory transferred to the Mountain State Gas Company, merely the well itself. And the Mountain State did not carry very much territory, it merely had the wells, and the South Penn Oil Company still retained the leasehold gas rights in those same leases. That is my recollection, and I believe that is correct.

Mr. Weil:

Q. He was asking about the Flaggy Meadow.

A. The Flaggy Meadow is what I am speaking of.

Q. You said Mountain State.

A. Well, Flaggy Meadow is what I mean. That was really the gas division of the South Penn Oil Company. It was a separate corporation, but it was really a division of the same company.

Mr. Steptoe:

Q. So that the statement of acreage——

A. I have that right here, if you wish it. It was 145 wells, 34,046 acres, transferred by the Flaggy Meadow Gas Company to the
816 Hope Natural Gas Company, in Doddridge, Harrison, Lewis, Wetzel, Monongalia, Marshall, Pleasants, Ritchie, Taylor, Tyler, Marion and Wood Counties.

Q. Irrespective of the formal transfer, however, the Flaggy

Meadow was the beneficiary, or had the right to take the gas from any well drilled by the South Penn. Is that the situation?

A. No. I think it was merely voluntary on the South Penn Oil Company's part when they transferred a well to the Flaggy Meadow. I never saw or don't believe there was any working agreement between the Flaggy Meadow and the South Penn. I think it was looked upon as a division of gas of the same company.

Q. Both being owned and controlled by the same people?

A. Yes, sir.

Q. And was really the marketing or gas end of the South Penn?

A. Yes, sir.

Q. Was the Flaggy Meadow Gas Company a West Virginia corporation?

A. Yes, sir. There is the charter right up there (indicating),—The first charter of any gas company in West Virginia that I know of.

Q. The Mountain State was likewise a West Virginia cor-
817 poration?

A. Yes, sir, it was.

Q. Will you state whether the Hope Natural Gas Company and the Reserve Gas Company are West Virginia corporations?

A. Each and both of them are, yes, sir.

Redirect examination.

Mr. Weil:

Q. You stated in your cross examination, Mr. Corrin, that the gas delivered by the Hope Company to the Union Gas Corporation and to the Northwestern Ohio Natural Gas Company was delivered at Sugar Grove and Wheeler Station, and counsel asked you if the lines of the Hope did not end at the state line and the gas transported from there through the Connecting Gas Company—through the lines of the Connecting Gas Company, and you answered that such was the case. Where was that gas measured?

A. The Hope Gas Company hasn't anything to do with delivering gas to the Union Gas Corporation. The word "Hope" is used there—If I used the words "Hope Natural Gas Company," I used them incorrectly.

818 Q. I mean, the Reserve, I should have said the Reserve Gas Company instead of the Hope.

A. The gas that the Reserve Gas Company transports through the lines of the Connecting Gas Company is measured to the Northwestern Ohio Natural Gas Company with the amount of the Hope Gas Company at Wheeler Station, in Ohio; the gas that the Reserve Gas Company delivers through the lines of the Connecting Gas Company, for the benefit of the Union Natural Gas Corporation is measured at Sugar Grove, Ohio.

Q. The Reserve Company has no measuring stations at the State line then?

A. No, sir, none at all.

Q. The Connecting Company receiving, as I believe you testified—2¼ cents, was it?

A. Yes, sir.

Q. —per thousand, for the transportation?

A. That is correct.

Q. Of that gas from that point at the state line to Wheeler and Sugar Grove Stations, respectively?

A. That is correct.

Q. You have given us the acreage held by several of these companies, one company being over a million acres, other companies large quantities—I forget the exact amounts, nor is it material
819 now—and you have stated that these companies paid a dollar an acre for the delay in the operation of leases, and after the leases were operated, $300 per year gas rental on each well; and you estimated that the amount paid—roughly estimated the amount paid to the land owners in West Virginia was from fifty million to sixty million dollars. You mean, as to these companies about which you have been testifying, without regard to all the other operators in the state, do you not?

A. Yes, sir. What I mean is, those amounts of money were paid by the South Penn Oil Company, the Hope Natural Gas Company and the companies that I have been connected with.

Q. Now, from your general knowledge of the business and the amount of acreage held by all the other gas companies in the State of West Virginia with which the Standard Oil Company is in no way associated, or in which they have no interest whatever, or in any of its affiliated companies, what would you estimate would be the payments made by them during the same period?

A. Well, I would say at least an equal amount that the Standard Oil Company has paid, running over a hundred million dollars in rentals alone.

Q. Can you give us the names of some of the larger com-
820 panies that are operating in the State of West Virginia—I mean gas companies—with which the Standard interests are in no way affiliated?

A. The Philadelphia Company or otherwise the Pittsburgh & West Virginia; the Carnegie Natural Gas Company; the United Fuel Gas Company; the Manufacturers Light & Heat Company; the West Virginia Central; The Fayette County Gas Company, and numerous smaller companies.

Q. Those companies that you have named are all very large companies, are they not?

A. Yes, sir, they are large companies and have operated to a large extent.

Q. You spoke of leases taken by scalpers and purchased by your company. What do you mean by that?

A. Well, I mean, that some of them are natives and some are professional traders; they will find out where large companies are taking territory, and they will follow on the track of them and grab up maybe one farmer or two or three——

Q. That is, get a lease upon the territory?

A. Yes, sir, leases, and then they will come to these larger com-

panies and endeavor to sell these leases to the larger companies at a higher price than they paid for them. And they very often
821 take these leases on terms that the larger companies would not take them, sometimes at a smaller and sometimes at a larger rental and royalties than the larger companies do.

Q. The bonuses paid for leases, what prices do those range from——

A. From 25 cents an acre—I have known of leases up to $100 and $150 a month.

Q. A bonus?

A. A bonus.

Q. That, of course, has nothing to do with the rental for delay or the gas rental on each well?

A. No, sir, that is hand money.

Q. That is paid for the lease?

A. Yes, sir.

Q. After there have been operations which show that any section is prospective gas territory, what is the fact as to it being the custom, under those circumstances, to pay these bonuses for the leases?

A. The land owner is just like anybody else, he soon gets wise to the value of it and how badly it is wanted, and correspondingly he raises his price.

Q. And these bonuses are paid wherever the leases have been developed or are reasonably prospective as gas territory?

A. Yes, sir.

822 Q. Isn't there active competition between the respective gas companies whenever the field becomes prospective as gas territory?

A. There certainly has been strong competition, and we feel the competition is stronger today than it ever was. There is a greater demand for gas territory now than there ever has been, and a greater endeavor by these different gas companies to get it—even reasonably good territory.

Q. Just as soon as there is development anywhere within a county, in a particular district, how do they go about it, to get these leases, the different companies, and how is this competition exercised?

A. Each company generally retains a corps of men. If there is a well drilled, each company tries to get its men in there as quickly as it can, and tries to get leases as quickly as it can, bidding one against the other, as to money consideration or bonus, and also terms.

Q. And has that competition continued ever since the development of oil and gas business in the State of West Virginia?

A. Yes, and I believe it always will continue.

Q. I believe you said that the competition is stronger than
823 it ever was?

A. I believe so.

Q. In addition to these advantages which you stated to counsel on cross examination, accrue to the State of West Virginia from this development, what do you have to say about the taxes, and so forth, assessed by the public authorities upon the oil and gas companies operating in that state?

Mr. Steptoe: Just a moment. Without entering a formal objection, it is suggested that counsel has taken full advantage of his suggestion of cross examining his own witness. A reasonable amount of it will be allowed without objection, but an objection will be made if this line of direct examination under the guise of cross examination is continued.

A. We think we certainly do pay our share of it, and sometimes we think more than our share. And it seems as though it is getting worse all the time.

An adjournment was here taken until Wednesday, June 30, 1920, at 10 o'clock, A. M.

824 Wednesday, June 30, 1920.

And now, Wednesday, June 30, 1920, the hour of 10 o'clock, A. M., having arrived, hearing resumed pursuant to adjournment.

JOHN B. CORRIN recalled.

NOTE.—By consent of the Commissioner, and agreement of counsel, the witness is withdrawn, to be recalled later for redirect examination.

H. A. WALLACE, a witness produced on behalf of the Complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Weil:

Q. Where do you live, Mr. Wallace?
A. Charleston, West Virginia.
Q. With what gas company are you connected, and in what capacity?
825 A. The United Fuel Gas Company and Cabin Creek Gas Company.
Q. In what capacity?
A. General manager of the United Fuel Gas Company and president of the Cabin Creek Gas Company.
Q. How long have you occupied those respective positions?
A. About four years.
Q. Prior to that time, did you have any experience in the oil and gas business?
A. I have had possibly thirty years' experience in the oil and gas business.
Q. State the various capacities.
A. In roustabout work, pumping, cleaning out, working on drilling wells, rig building, tank setting, in charge of oil properties, and in charge of gas properties.
Q. You have been through every department then from the prac-

tical operation of a lease up to the management of large oil and gas properties?

A. I have.

Q. By whom were you employed prior to the time that you accepted employment with the United Fuel Gas Company?

A. The Hope Natural Gas Company.

Q. How long were you with them?

826 A. From the year 1899 until some time during the year 1912.

Q. And what were you doing for them? What was your position with them?

A. At the time of my employment, I was roustabout, the beginning of my employment with that company; and later field foreman, supervising the work; laying pipe line, cleaning out wells, drilling wells, and compressor station work, and so forth. And later, division superintendent for that company, which position I held at the time I left.

Q. How long were you division superintendent?

A. I couldn't state exactly—several years, though.

Q. And did you have charge of the operations of the Hope Company, as division superintendent, in a certain section of West Virginia?

A. I did.

Q. What portions of West Virginia, or was it all of West Virginia, as division superintendent?

A. A certain portion of it. At times I was looking after all of it, during the absence of the other division superintendents.

Q. When you went with the United Fuel Gas Company, what were its operations at that time? How far had it gone with its operations?

827 A. They were drilling numerous wells, laying lines and delivering gas to different markets.

Q. Do you know how long they had been in operation at the time you went with them?

A. As I understand, the company was incorporated in 1903, but until the year 1909, was principally engaged in acquiring leases and drilling wells and testing out their properties, and investing a large amount of money, considerably over a million dollars, before they attempted to deliver gas to any place. In other words, they had no revenue of any kind during those six years.

Q. Then in 1909 they began doing what?

A. They began marketing their gas.

Q. What year was it you went with them?

A. In 1912.

Q. Now, in 1912 then, at the time that you went in their employment, they were engaged in drilling and operating for gas, and in piping that gas to certain markets?

A. Yes, sir. The large transportation lines, the greater part of them, had been already completed at that time and were in operation.

Q. You spoke about the Cabin Creek Company. What is that?

A. The Cabin Creek Gas Company owns approximately 8,005

acres in the Cabin Creek district, Kanawha County, and have
828 a considerable amount of gas territory, as well as very valuable oil properties.

Q. Is the stock of that company owned by the United Fuel Gas Company or not? What is the fact?

A. The United Fuel Gas Company are part owners in the Cabin Creek Gas Company.

Q. Does it own a controlling interest in the Cabin Creek Gas Company?

A. It does.

Q. Now, then, will you give us the gas territory and number of wells of the United Fuel Gas Company? Before doing that, let me ask you if you have had prepared a map showing the lines and territory of your company?

A. I have.

Q. Will you let me have a copy of that, please?

A. Yes, sir.

Q. You have several copies, have you?

A. Yes, sir. You have all that I have of that kind. There is a larger map similar to that.

(Map marked Pennsylvania Exhibit No. 22.)
(Pennsylvania Exhibit No. 22 shown witness.)

Q. I show you this map, which I have had marked for the
829 purpose of identification Pennsylvania Exhibit No. 22. Now, showing you that map, does that correctly show the location of the gas territory of the United Fuel Gas Company, the location of its lines in the field, its transmission lines in Ohio, Kentucky and West Virginia, and the various points which it supplies with gas?

A. It does.

Q. Have you carefully examined this map?

A. I have.

Q. And you know, from your own knowledge of the territory and the lines and points, and so forth, that it correctly represents what I have asked?

A. It does.

Mr. Weil: I offer in evidence Pennsylvania Exhibit No. 22, and will now interrogate the witness with reference to that, and the facts represented by it.

Q. Now, then, how much gas territory does the United Fuel Gas Company carry? You can use that memorandum that you have, if you want to.

A. The total acreage, operated and unoperated, is 806,785.53 acres.

830 Q. Now, give us in a general way the location.

A. This acreage is located in Roane County, West Virginia; Jackson County, West Virginia; Kanawha County, West Virginia, Clay County, West Virginia; Lincoln County, West Virginia; Boone County, West Virginia; Putnam County, West Virginia; Logan County, West Virginia; Wayne County, West Virginia;

Mingo County, West Virginia; Martin County, Kentucky. There is some other scattered acreage in Kentucky that I couldn't give you just the location of,—scattered acreage in Martin County.

Q. The acreage in Kentucky is what is called the "Kermit Field," is it not?

A. Yes, sir.

Q. How much of this acreage do you estimate is developed or operated?

A. The operated acreage in West Virginia is 62,336.6 acres.

Q. And how much of the acreage do you estimate is developed?

A. Well, that would be it, that would constitute the developed acreage.

Q. That is the developed acreage?

A. Yes, sir.

Q. And how much in Kentucky?

A. In Kentucky, 4,304.1 acres.

Q. That is developed?

831 A. That is developed.

Q. Now, Mr. Wallace, how many wells—gas wells?

A. 673 gas wells.

Q. How many of those are in West Virginia?

A. 606 wells in West Virginia, gas wells.

Q. And are the rest of them in Kentucky?

A. Kentucky.

Q. How many are there of the rest?

A. 67. Pardon me just a moment. I believe I have got that wrong. There are 626 wells in West Virginia.

Q. And how many in Kentucky?

A. Forty-seven in Kentucky.

Q. You have none in Ohio.

A. None in Ohio.

Q. Now, will you give us the general routes and the length and sizes of your main transmission lines?

A. Our main transmission line, leading from the Roane County field, beginning at Roxalana, in Roane County, West Virginia, extending to Portsmouth, Ohio, consisting of 10-inch, 14-inch and 16-inch pipe, approximately 125 miles in length. This line is known as our line "A". We also have——

Q. Just a moment, before you get to another line. That line crosses the Big Sandy River, does it not, at Kenova?

832 A. It does.

Q. And runs through Kentucky, up to a point above Ashland, where it divides and crosses the river into Ohio, at some place above Chinnville, and continues on to Portsmouth, on the other side of—The other branch continues on to Portsmouth, on the other side, on the Kentucky side of the Ohio River; while the branch continues up to Wheelersburg, Sciotoville, New Boston, to Portsmouth, on the opposite side, the Ohio side of the Ohio River? Is that the fact?

A. It is.

Q. And this is shown here on the map?

A. It is.

Q. Now, then, to what points is this line particularly designed to transport gas, up to what points? Or, transportation to what points is this line used for?

A. Coal Grove, Ohio, Irontown, Ohio, Wheelersburg, Ohio, Scioto-ville, New Boston and Portsmouth, all in the state of Ohio.

Q. Now, what about those towns in Kentucky—that is, Catlettsburg and Ashland, and so on?

A. We have the main line on the opposite side of the river in Kentucky supplying Catlettsburg and Ashland, Russell, Chinnville, in Greenup County, and Boyd County, Kentucky.

833 Q. What towns in West Virginia does this line supply?

A. Kenova, Ceredo, Huntington, Barboursville, Ona, Culloden, Hurricane, Nitro, Poca, Sissonville, Clendenin, and other smaller places.

Q. The United Fuel Gas Company produces its gas then in the Roane County field from its own gas territory, and through its own gas wells, and transports this gas through this line supplying these various cities and towns in West Virginia, Ohio and Kentucky, as you have described. Now state whether it does that in its own name directly, as a producing, operating, transporting and supplying company?

A. It does supply all these various places in its own name and with its own gas, transported through these lines. Also, in addition to the river crossing previously spoken of, there is another one at Huntington, supplying Corryville, Bradrick, Proctorville and Chesapeake, in Lawrence County, Ohio.

Q. That crosses the Ohio River there at Huntington?

A. It does.

Q. And is there another crossing, or two crossings, near Kenova?

A. There are two crossings. One of them has been pre-

834 viously referred to, and there is another additional crossing at Chinnville, from Greenup County, Kentucky, into Lawrence County, Ohio.

Q. In addition to that Chinnville crossing, there are two lines that cross the Big Sandy at Kenova, and above, are there not?

A. Yes, sir, one line crossing near Huntington, that has been previously referred to——

Q. No, I mean right there, just above Kenova.

A. There is a line leading across the point at Coal Grove from Boyd County, Kentucky, into Lawrence County, Ohio; a line crossing near Chinnville from Greenup County, Kentucky, into Lawrence County, Ohio; the line crossing again from Greenup County into Ohio near New Boston, Ohio.

Q. Now, at Portsmouth, Ohio, do you supply the town of Portsmouth direct, in the name of the United Fuel Gas Company, or do you supply some local company there that has the distributing system?

A. We supply the local company at Portsmouth, at the city limits, with gas.

Q. What is the name of that company, do you remember?

A. The Portsmouth Gas Company.

Q. And at all the other towns that you have described, the United Fuel Gas Company maintains the distributing systems
835 itself?

A. It does.

Q. Now, take up the next important transmission line of the company?

A. We have an additional line practically paralleling line "A," previously spoken of, known as our line "S," leading from the Roane County field to Ball's Gap measuring station. This line is approximately 49 miles in length, consisting of 10-inch, 12-inch and 20-inch pipe; by far the larger proportion of it being 20-inch O. D. pipe.

Q. Now, this line supplies, as shown by your map, a number of towns in West Virginia?

A. It does.

Q. And at Ball's Gap, with what line does it connect there?

A. With the 18-inch line belonging to the Columbia Gas & Electric Company, of Cincinnati.

Q. And where did that carry the gas?

A. The 18-inch gas line carries the gas from our measuring station at Ball's Gap, at which point the gas is measured to the Columbia Gas & Electric Company, to their Kenova compressor station; from which point it is compressed and delivered to a 20-inch line to the City of Cincinnati.

Q. How many miles distant?

836 A. 123 miles from Kenova compressor station to Cincinnati, and 29 miles from our measuring station to Kenova.

Q. You refer to the only Cincinnati—that is, in Ohio?

A. Cincinnati, Ohio.

Q. Now, what is your next important transmission line?

A. Our next line of importance is an 18-inch line leading from what is known as our Spencer gas field, located in Roane and Jackson Counties, West Virginia, to and across the Ohio River, near Ravenswood, West Virginia, at which point we measure the gas before crossing the Ohio River, to the Ohio Fuel Supply Company, of Ohio.

Q. What is the size of that line?

A. The line is 18 inches, outside diameter.

Q. And you supply, do you, a number of towns in West Virginia, before you reach the river?

A. We do.

Q. And the Ohio Fuel Supply Company takes this gas, as I understand, at the low water mark on the Ohio side?

A. It does.

Q. And transports it where?

A. To various cities throughout Ohio.

Q. I beg your pardon.

A. To various cities and towns throughout the State of Ohio.

837 Q. What are the larger cities or towns? Just name one or two of them, so as to get the general direction of it.

A. I am not very familiar with the towns.

Q. Well, if you don't know, it is all right. Now, give us your next line. What is this called on your system—one was "A" and the other was "S," and what is this called?

A. That is called line "E."

Q. Now, then, take your next line.

A. We have another line connecting with our line "A," near Kenova, West Virginia, running south to Inez, Kentucky, and ending at Kermit, West Virginia. This is a 10-inch line, and crosses the state line, or river, near Leach, Kentucky, and Kenova, West Virginia, leading from West Virginia into Boyd County, Kentucky; again crossing the line, the river, between Buchanan and Louisa, Kentucky, crossing the river from Lawrence County, Kentucky, into Wayne County, West Virginia; again crossing the line from Wayne County, West Virginia, near Ft. Gay; leading again into Lawrence County, Kentucky, from Wayne County, West Virginia. This line connects with an 8-inch line and a 6-inch line near Inez, Kentucky, and extends across the river, or state line, into Kermit, Mingo County, West Virginia; then entering our
838 compressor station at Kermit, West Virginia, the gas is compressed and delivered back into our line, our 16-inch O. D. line, known as "B. M. 22."

Q. Extending from where?

A. From Kermit, West Virginia, this line B. M. 22 leads to Inez, Kentucky, from the compressor station in Kermit, West Virginia.

Q. Now, the gas that is obtained in this line, as you have described, comes, in part, from the Roane County field, from the Wayne County field, and the Kermit field, in West Virginia?

A. Also from the Kanawha field, in Clay County.

Q. And the Clay County field and the Chapmanville field or district in West Virginia, and from the Kermit field in Martin County, Kentucky, does it not?

A. It does.

Q. And that gas is all mixed and compressed at your Kermit station in West Virginia?

A. It is.

Q. And sent up as far as Inez, across the river to Inez, in Kentucky?

A. It is.

Q. And there delivered to whom?

A. To the Central Kentucky Natural Gas Company, sup-
839 plying towns and cities in Central Kentucky and the Louisville Gas & Electric Company, of Louisville, Kentucky.

Q. The Louisville Company supplies gas to Louisville, Kentucky, does it, as well as to stations en route?

A. Its gas is practically all supplied to domestic consumers in the City of Louisville, Kentucky.

Q. How far is the gas transported by the Central Kentucky Company, the longest distance, from Inez?

A. The distance from Inez, Kentucky, to Frankfort, Kentucky, is 142 miles.

Q. And how far is it from Inez to Louisville?

A. The distance from Inez, Kentucky, to Louisville, Kentucky—the length of this line is 180 miles.

Q. Now, you supply from this same line, do you not, beginning at Kenova, towns on both sides of the river in West Virginia and Kentucky, at different points along the line?

A. We do.

Q. Then you have quite a number of such towns, as shown on the map here?

A. We have.

Q. Now, give us your next large transmission line?

A. Our next large transportation line is known as line "T,"
840 20 inch O. D. pipe; which line connects with, or has an extension known as our line "M," 16-inch O. D. pipe. These two lines were practically built to supply the Hope Natural Gas Company and the Pittsburgh and West Virginia Natural Gas Company, transporting the gas from the Kanawha County gas fields at Buff Lick, and also the gas from Roane and Kanawha Counties, near Clendenin.

Q. Now, how long is that line?

A. The line "M," consisting of 10-, 12- and 16-inch pipe—the larger proportion of it being 16-inch—is 19.2 miles in length.

Q. Now, line "T"?

A. Line "T," to which line "M" connects, is 39.29 miles in length.

Q. About 60 miles then altogether?

A. Yes, sir.

Q. Now you say it sells gas there,—it delivers gas to the Hope Natural Gas Company and the Pittsburgh & West Virginia Gas Company. At what points does it make that delivery?

A. At Cedarville measuring station, in Gilmer County, West Virginia.

Q. And where does the Hope Natural Gas Company take it?

A. At that point, Cedarville, West Virginia.

Q. And to where does it take it?

841 A. I couldn't tell you just what points it travels. I believe it eventually leads to Hastings Station in Wetzel County.

Q. Do you know where the Pittsburgh & West Virginia Gas Company takes it?

A. The gas is measured to them at the same point in Gilmer County.

Q. To what point do they take it?

A. That gas is eventually delivered to Pittsburgh, Pennsylvania.

Q. The Pittsburgh & West Virginia Gas Company is a subsidiary of the Philadelphia Company, that supplies Pittsburgh and vicinity, is it not?

A. It is.

Q. Now, what other line have you—any main transportation line?

A. I believe that is practically all of the important transportation lines.

Q. You have a line here, for example, called your B-19, 10-inch line, extending from the Wayne field to a point called Walbridge, in Kentucky, have you not?

A. We have.

Q. Now, that line is about how long?

A. Approximately 25 miles.

842 Q. Well, that will do; that is near enough. Now, that takes the gas from your Wayne field, in Wayne County, West Virginia, and transports it across the river to a point at Walbridge, where it connects into the line which you have already described as your—What was that line?

A. Line B-10.

Q. That is correct, is it?

A. It is. At this point at Walbridge the gas is compressed at a compressor station.

Q. Now, that line from that Wayne field, which takes the gas across there, supplies no towns in West Virginia at all, does it?

A. No, I don't believe there are any towns on that line.

Q. The line shown on your map here, V-16, a 16-inch line connecting your Chapmanville district, Big Creek, Logan and Cherry Tree Bottom, and so forth, in what is called the Chapmanville field, in Logan County, West Virginia, transports the gas up to the compressor station at Kermit, does it not?

A. Yes, sir, it does.

Q. And that gas is there compressed and sent through the line you have already described as your B. M.-22?

A. It does, yes, sir.

843 Q. And what is the size and the length of that line?

A. That line is approximately 25 miles in length, of 16-inch O. D. pipe.

Q. Where does that gas go to?

A. That gas goes to Louisville, is delivered to the Louisville Gas Company at Inez, Kentucky, and to the Central Kentucky Gas Company at the same point, for distribution in Louisville, Kentucky, and central Kentucky towns.

Q. This map offered in evidence and identified as Pennsylvania Exhibit No. 22, does not purport, of course, to show all the gathering lines and connections with the wells, and so forth, but simply the main transmission lines and the towns supplied?

A. Yes, sir; and the larger field lines.

Q. And the larger field lines?

A. Yes, sir.

Q. You supply gas also to the City of Charleston, do you not?

A. We do.

Q. What are the large cities in West Virginia that are supplied by your company? Give us simply the larger cities.

A. Huntington, Charleston, Catlettsburg——

844 Q. No, in West Virginia.

A. And Spencer, West Virginia.

Q. And what are the large towns in Kentucky?

A. Catlettsburg, Ashland.

Q. Louisa, is that a large town?

A. To Louisa. I believe that would take in the larger cities.

Q. And what large towns or cities in Ohio?

A. Ironton, Wheelersburg.

Q. What is the matter with Portsmouth?
A. Well, Portsmouth, Ohio.
Q. And Wheelersburg, Portsmouth, Ironton, and what others?
A. Portsmouth, New Boston, Ironton; that takes in the larger cities.
Q. Those are the larger cities in Ohio?
A. Yes, sir.
Q. Now, what was the amount of your gas production in the year 1919?
A. The total gas sold during the year 1919 amounted to 51,650,-275,000 cubic feet. Of this amount, they purchased 12,086,690,000 cubic feet from other operators.
Q. What is the total number of your consumers in West Virginia?
A. The total number of our domestic consumers in the
845 State of West Virginia, was 24,559, at the ending of the year 1919.
Q. And what is the number of industrial?
A. We have 148 industrial consumers in West Virginia.
Q. Now, how many consumers have you in other states, both domestic and industrial?
A. In other states we have 11,777 domestic consumers.
Q. And how many industrial?
A. 47 industrial consumers.
Q. Now, give us the amount of gas delivered to the domestic consumers in West Virginia and the industrial consumers in West Virginia, and to the domestic consumers outside of West Virginia, and to the industrial consumers outside of West Virginia, if you have that? That is, for 1919, last year.
A. We sold to domestic consumers outside of the State of West Virginia, in the year 1919, 1,491,447,000 cubic feet of gas.
Q. And to industrial consumers outside of the state?
A. To industrial consumers outside of the state, we sold 2,507,-654,000 cubic feet of gas.
Q. And to domestic consumers inside the state of West Virginia?
A. To domestic consumers inside the state of West Vir-
846 ginia, we sold 4,336,112,000 cubic feet of gas.
Q. And to industrial?
A. To industrial consumers in the State of West Virginia, we sold 6,986,926,000 cubic feet.
Q. And how much gas did you deliver to other gas companies?
A. We wholesaled to other companies inside the State of West Virginia 30,515,535,000 cubic feet of gas. Measured to industrial consumers, or to wholesale parties, outside of the state, 5,812,601,000 cubic feet of gas; or a total of 36,328,136,000 cubic feet of gas, wholesaled to parties in and outside of the State of West Virginia.
Q. The gas delivered to other companies, as you say,—measured to other companies inside of the state, you have already described the points to which that gas was taken by those different companies, have you not?
A. Yes, sir. The greater portion of it was to be delivered outside of the state, measured inside of the state.
Q. Now, what has been the investment of the United Fuel Gas

Company, or what is the investment of the United Fuel Gas Company, in the State of West Virginia, say at the end of the year 1919?

A. Between twenty-three and twenty-four million dollars.

Q. That is actual cash invested?

847 A. Actual cash invested.

Q. And what was the amount of money expended by the company in the acquiring of its property and the development of its property, and so forth, including its investment, up to, let us say, the end of the year 1919? You can give us a rough estimate of that, or as accurate as you can, without going into detail?

A. Well, the figures that I gave you as investment, between twenty-three and twenty-four million dollars.

Q. At what amount is the whole investment of the company at the present time carried upon the books of the company, taking into consideration the value of its gas territory which it has developed, and the amount expended upon its lines, and so forth?

A. Do you mean the actual investment, or the valuation that is placed on it?

Q. The valuation at the present time, placed by the officers of the company upon the property, and carried upon its books accordingly. Give it to us in round numbers.

A. It is very close to $60,000,000.

Q. Have you any data showing the number of cubic feet, the average amount per consumer, of the domestic consumers in West Virginia and those in other states?

A. I have.

848 Q. That are in your line?

A. Yes, sir.

Q. Give us that. What was the average consumption per consumer of the domestic consumers in West Virginia, Ohio and Kentucky, respectively?

A. The average domestic consumer in Charleston, West Virginia, in the year 1919, used 175,000 cubic feet of gas for the year. The average domestic consumer in the city of Cincinnati, Ohio, for the same year, used 84,000 cubic feet of gas. The average domestic consumer in the City of Portsmouth, Ohio, during the same year, used 137,000 cubic feet of gas.

Q. If your company was compelled to supply, under the terms of the proposed legislation, which we are now resisting, an adequate supply to fill the requirements of the domestic, industrial and other consumers of the State of West Virginia, before taking any of the gas outside of the state, what, in your opinion, would be the effect of this upon your ability to transport any gas out of the state?

Mr. Blue: The State of West Virginia objects to the foregoing question, as improper, irrelevant and immaterial, and for the

849 reasons heretofore assigned in objections to questions of like kind and import.

The Commissioner: Note the objection and let the witness answer.

A. I feel that in a very short time, in cold weather especially, we would have no gas to transport out of the state, and for that reason I do not believe domestic consumers and other people would care to

be connected to our lines, if they could only receive a supply of gas during the summer season, and in the winter time, when they absolutely needed the gas for heating and lighting and comfort, to have the supply discontinued, they naturally would not care to use gas for fuel. It would be absolutely dangerous, as I understand the method supposed to take care of this measure; in as far as you would be called upon at most any hour for a large supply of gas, it would necessarily take the gas away from the lines leading into the other states; providing that happened at night or at times the people were away from home, the gas would go out, no doubt, in their homes, if these parties were shut off in the meantime; and before they returned or got up, the pressure would be increased in their lines, and the gas would flow through and come into their houses, and it would not be lit, and there would be danger of asphyxiating
850 the people, and also of blowing up their houses and killing any number of people. I wouldn't feel that I would want to be connected onto a gas line under similar conditions, and I don't believe the average consumer would care to.

Q. What do you know as to what the effect would be upon increasing the demand for industrial purposes in the State of West Virginia?

Mr. Blue: The State of West Virginia objects to the foregoing question as improper, irrelevant and immaterial, and for the reasons heretofore assigned in objections to questions of like kind.

The Commissioner: Note the objection and let the witness answer.

A. I feel that in the course of a year or year and a half, the gas would be practically all sold in the State of West Virginia for manufacturing purposes; as I have had in the last month applications for gas from big industries that I feel—and the party that made the application assured me that in his mind they would want
851 50,000,000 cubic feet of gas a day between this and fall; and no doubt the other numerous applications I have had will take from seventy-five to one hundred million cubic feet, provided we would care to supply it to them. Also, I know that in the State of West Virginia today it would be very profitable for the carbon industries to use this gas in making carbon; they realize fully 30 cents a thousand cubic feet from the gas by making carbon black in the field,—an industry in which, we all know, all the heat units and valuable substances in the gas is absolutely wasted. I know this to be a fact, because I have had the applicants for the gas, and I know what the carbon industry is paying and what the price for carbon is.

Mr. Blue: The State of West Virginia moves to exclude the answer of the witness, for the reason, among others, that the answer undertakes to give a construction to the statute, which is not warranted by the terms of the statute.

The Commissioner: Let the motion be noted and let the examination proceed.

Mr. Weil:

Q. Mr. Wallace, you mentioned that a number of applica-
852 tions had been made by large industrial plants, demanding gas, and so forth. Can you give us the names of some of them, their location, and so forth?

A. In the last week or ten days, Mr. H. G. Scott, manager of the Nitro Charles Industrial Corporation, and his assistant, both called at my office, endeavoring to make arrangements for a large supply of gas for manufacturing purposes at Nitro, West Virginia, located about twelve miles from Charleston. He informed me that he already had secured industries which were locating at Nitro, as follows: The Central Foundry & Equipment Company, the Nitro Pulp Mill, the Ribrated Products Company, the Nitro Products Company, the Miller Rubber Company, two large plants, Nos. 1 and 2; the Virginia Sheet Metal Company; the International Aluminum Company; the Southern Dyestuff Company. These industries, Mr. Scott informed me, had already located at Nitro, or were locating there, and that other people or parties were dickering for sites to be located at Nitro, which he felt were as good as closed. The Goodyear Rubber Company, the International Nickel Company, the Cab-Co Steel Company. I asked both Mr. Scott and his assistant about how much
853 gas he felt these consumers would want. Well, he said that they wanted any amount that they could get, but assured me that they would be pleased to have 50,000,000 cubic feet by this fall; he thought they would want 50,000,000 feet daily by the time winter hit them. Of course, I told him it could not be considered. Then I have had applications from numerous other industries at various times, of which I don't remember the names, because they were all turned down. We could not supply them with gas for industrial purposes, wouldn't take them on our line. Upon those numerous applications, I base my opinion that in from a year to a year and a half there would be no gas transported from our state for domestic purposes in winter time.

Q. From your practical knowledge, Mr. Wallace, and experience in the operation of gas lines and gas plants, what would you say would be the effect upon the operation of these lines, if during the colder spells of winter you were called upon from time to time to supply demands to make up deficits or shortages in any of the cities or towns or industrial plants in the State of West Virginia, or to companies supplying some of those cities, towns or plants? What would be the effect upon the operation of your system of lines and upon your plant?

854 Mr. Blue: The State of West Virginia objects to the foregoing question as improper, irrelevant and immaterial, and that it embodies in itself a construction of the statute not warranted by the terms of the statute.

The Commissioner: Note the objection.

A. I believe that it would be absolutely impossible to operate our gas company successfully as a gas company, under those conditions,

and as no doubt we would lose all our profitable business outside of the State of West Virginia. Consumers, as I stated, would not want to be bothered with our service, as it would be discontinued at practically the time they needed it the worst, and it would be very dangerous to endeavor to heat or cook with it, especially to heat with it, on account of the supply being possibly taken away from them during the night time when they were asleep, and coming on again and allowing the gas to flow into the residence when there would be no light to ignite it; and under those conditions, of course there is great danger of asphyxiating a large number of people, providing there was some little light in the house that had not gone completely
855 out, the gas would ignite and explode and blow up the building. Or, providing somebody came into the house and lit a match, not being familiar with what might occur in the gas business the same thing would happen—blow up the building, and possibly kill numerous people, and it would be a very dangerous and hazardous business.

Q. In constructing your plants and putting in your appliances, are the same designed by engineers and experts with reference to certain prospective maximum and minimum business which the lines are intended to take care of?

A. They are, absolutely.

Q. Your compressing stations, the size of your pipes on various lines, are designed, are they not, with that in contemplation, and that end in view?

A. In all cases.

Q. Is there any way by which a company operating in any given district could make any computation in advance of the demand that might be made upon it from time to time, to make up the deficit or shortage of other companies operating in the same district, or of the industrial or other plants requiring gas in the same district?

A. It would be absolutely impossible to construct your
856 lines, compressor stations and field equipment in such a manner that you could take care of the various companies and industries which would possibly make demands on you for gas at certain times, and also take care of your own business in a satisfactory manner, or anything like a satisfactory manner to your consumers.

Q. What is the situation at the present time as to there being competition among the big companies in taking up territory and leasing the territory for gas purposes, wherever they find a field is being developed, or where there is a prospective gas field?

A. There is a large amount of competition along the line of taking up leases, and it is steadily increasing. That is, the competition is getting stronger; they are all out for getting on the ground as quickly as possible after any developments showing that the territory has a certain value, either gas or oil. The prices paid are increasing enormously, making it much more expensive to secure gas territory, or do business along the lines as has been done in the past. Practically a very small amount of gas acreage has been developed in

recent years—been discovered rather in recent years; and what had previously been discovered has been to a great extent depleted.

Q. Mr. Wallace, what is your knowledge and information
857 as to the exhaustion of the gas in the various gas fields in Pennsylvania, Ohio, West Virginia, Kentucky, and so forth,—any of the fields tributary to the sections supplied by the companies we have been talking about, in Pennsylvania, Ohio and West Virginia?

A. I know that the gas in Pennsylvania, Ohio, Kentucky and West Virginia has been rapidly decreasing, in the amount of gas to be obtained.

Q. Do you know of any new fields being found within recent years, in any of those states, or adjacent thereto?

A. None of any size, that would warrant its being called a valuable discovery.

Q. Is your company making investigation and sending out its scouts for the purpose of obtaining other and further gas developments in any of these states adjacent to this territory or section?

A. We have an organization especially for that purpose, keeping them activily engaged in endeavoring to secure new territory; in other words, leasing up new territory where there are any indications whatever that there might be gas.

Q. Wherever that may be found?

A. Yes, sir.

Q. Whatever state——

858 A. In whatever state it might be found.

Q. Do you know, from your own experience and knowledge, whether other companies are doing substantially the same thing—the other larger gas companies?

A. I know that practically all the other large gas companies are doing the same thing.

Q. What, if any, use is being made at the present time by these companies of government reports and geological surveys, and so forth?

A. They are giving them close attention, regarding geological reports and surveys made by the state geologists; also employing geologists to enable them to locate gas and oil fields, to a considerable extent. I know that holds true with my own company and with most of the other companies.

Q. Take the consumers upon your lines in West Virginia and Ohio and Kentucky: what are the facts as to special appliances being necessary to be installed for the purpose of burning natural gas instead of other fuel?

A. They have to have, all domestic consumers, special appliances for using natural gas.

Q. What do you know as to whether or not any of those communities have constructed their houses with special reference to these appliances?

859 A. I know that some communities—in fact, practically all communities—have their buildings constructed along the lines of burning gas. In some communities the entire population

have had their buildings constructed without flues of any kind; that is, such as chimneys. That was brought very vividly to my mind here recently, in the desire to discontinue supplying gas to a certain locality. We were not allowed to do it, from the fact that the people could not burn any other kind of fuel; they had no way to take care of coal, wood, or anything of that kind, without rebuilding their houses, to a certain extent.

Q. You say that exists in certain localities, and exists in full communities, to your knowledge?

A. Yes, sir.

Q. What would they have to do in the event of the discontinuing of the natural gas supply?

A. Well, I would say that practically all their appliances would have to be removed, the present appliances, and installations made of proper appliances for burning coal and other fuel.

Q. And what would they have to do with those houses?

A. They would have to certainly make wonderful changes in those houses that had no chimneys or flues, for the purpose
860 of taking care of coal or wood, or anything of that kind. I wouldn't know myself exactly what I would do; I believe I would tear it down.

Q. Have you any information as to what would be the average cost—I say the average cost, or perhaps you might give us what information you have on that subject—of changing the appliances for burning natural gas to other fuels, such as wood or coal?

A. I haven't a great deal of information along that line. From merely running it over in my mind, I would approximate the cost at around $300 or $350 for the average consumer, at the present prices of material.

Q. The relations which you occupy to some of these other companies, that you call "wholesale," to whom you wholesale gas, that is gas which you supply to other natural gas companies, such as the companies that take it to Louisville and Cincinnati and Pittsburgh, and so forth—Are those relations covered by contracts?

A. They are.

Q. Do you obligate yourself to supply to such companies any particular quantity of gas for a given period?

A. The contract calls for a specified amount of gas.

Mr. Blue: The State of West Virginia moves to exclude the
861 answer, for the reason that the contract is the best evidence, and that the answer of the witness is merely hearsay.

The Commissioner: Let the motion be noted.

Mr. Weil:

Q. What do you estimate you are required to expend annually in the laying of lines, drilling of wells, and for compressor stations, in order to maintain, as far as possible, your gas supply?

A. I would say, providing we did not lay any large transportation lines, that the expense would run annually, in the next few years, between two and three million dollars yearly, and will increase as the field gets older.

Q. You said from two to three millions?
A. Yes, sir.
Q. What does it cost now to drill a well in your territory?
A. Our wells are running from $14,000 to $35,000 a well. Some of them, being rather exceptions, are running considerably higher than $35,000. They are more after the plan of wildcat wells.

Q. What is the situation as to the cost of operation at the
862 present time, as compared with previous periods?

A. The cost of operation has increased enormously in the last four years. I would say, completing a well, possibly between three and four times what it was in ordinary times. The laying of your pipe lines has increased in like proportion, and steel pipe that you originally purchased around $35 a ton, now runs about $100 a ton, providing you can get it. You have to pay a premium today to get secondhand material at much higher prices than you can get new material from the mills, providing you can secure shipment.

Q. What has been the policy of your company, and what is its present policy and rule, as to discouraging and discontinuing, as far as possible, the supply of gas to industrial consumers?

A. We have at no time encouraged manufacturing industries to come into our community to secure gas for manufacturing purposes. On the other hand, since my connection with the company at least, they have always discouraged it, and have in recent years refused to connect up industrial consumers, providing they moved into our territory, and have given them all to understand that there is little likelihood of their securing an adequate sup-
863 ply of gas during cold weather—that they can be expected to be shut down during the winter time.

Here a recess was taken until 1:30 o'clock, P. M.

864 Wednesday Afternoon, June 30, 1920.

And now, the hour of 1:30 o'clock, P. M., hearing resumed, pursuant to adjournment.

H. A. WALLACE resumes the stand.

Direct examination (continued).

Mr. Weil:

Q. Mr. Wallace, you testified this morning about the Kermit field in Mingo County, West Virginia, and in Martin County, Kentucky. Those two fields, in West Virginia and Kentucky, are practically the same field divided by the river, are they not?
A. They are, yes, sir.
Q. That is, the Big Sandy, I believe?
A. Yes, sir.
Q. How wide is the river at that point, do you know, do you remember—or about?
A. Oh, a couple of hundred feet.

Q. And how many wells have you in that field in West Virginia?
A. Twenty.
Q. And how many in Kentucky?
A. Forty-seven.
865 Q. What is the closest of those wells in West Virginia to the river?
A. The wells on each side of the river in both counties, in both states, are very close to the river bank.
Q. Are the gas-bearing sands the same on both sides of the river?
A. Practically the same; yes, sir.
Q. And is the gas found in the sand about the same distance from the surface, on both sides?
A. It is; yes, sir.
Q. It is a continuous sand then, is it, extending under the river?
A. It is; yes, sir.
Q. In both of those fields, one in West Virginia, and the other in Kentucky?
A. Kentucky; yes, sir.
Q. Practically the same field?
A. Practically the same field.
Q. Can you tell, or do you know, whether the gas that is produced in wells nearest to the river on the West Virginia side, or those nearest to the river on the Kentucky side, draw their supply of gas from West Virginia or Kentucky, respectively?
A. It would be impossible to determine. No doubt some
866 of the gas from the wells in West Virginia is coming from Kentucky, the line in Kentucky; but that, of course, could not be determined.
Q. And some, I suppose, in Kentucky comes from West Virginia?
A. Comes from West Virginia.
Q. As I understood you this morning, however, all of that gas, whether produced on the Kentucky or the West Virginia side, goes into the compressing station on the West Virginia side, and is there compressed for transmission through the lines you have described to Inez, and there to Louisville or the Frankfort lines?
A. It does; yes, sir.
Q. We have had considerable testimony in the case, both by you and by others, on the subject of these measuring stations that are located upon the lease, by which gas is measured. I wish you would describe those measuring stations, of what they consist?
A. Well, there are different kinds of measuring stations. For instance, take it where this gas is measured to the Louisville Gas and Electric Company and the Central Kentucky Natural Gas Company, at Inez, that consists of orifice stations, what are known as orifice meters——
Q. Orifice?
A. Yes. The gas measured through those,—the amount of
867 gas is determined by a differential pressure; the difference taken on the water reading on the inlet to the orifice, and the outlet of the orifice. There is a small variation in pressure, of course, in the inlet, to the outlet. Then the amount of your gas is deter-

mined by figuring out from your water reading on these charts on your differential pressure; and at the same time taking your line pressure into consideration, which was registered by a pressure gauge. At other stations, take it at Sandyville, we have what is known as a Pitot tube station—that is, a series of tubes——

Q. That is, Pitot tubes?

A. Yes. They are also figured up from the differential pressure; and the water readings taken every fifteen minutes, to ascertain the amount of gas flowing through them. At other points we have what is known as a proportional meter; however, they are not installed in any large wholesale contracts, mostly in manufacturing establishments. They consist of a proportional meter, which registers the amount of gas on the dial that passes through them, at the pressure, the line pressure.

Q. These proportional meters are not used, are they, where there is delivery of gas from one gas line to another, in large quantities?

A. No, sir.

868 Q. The measuring stations consist——

A. Of the Pitot tubes.

Q. —for these purposes, consist of the Pitot tube stations?

A. And the orifice meter stations.

Q. And the orifice meter stations. Now, in both of those stations, the measurement is predicated and based upon the flow and passage of the gas, is it not?

A. Yes, the measurement of the gas is taken while the gas is in action, flowing through the lines.

Q. And the gas cannot be measured except——

A. While in motion.

Q. —in motion and passing through?

A. It cannot be measured in any other way.

Q. Where these stations are located then, and the gas passes from one line into another, there is no stoppage or cessation of the flow, to the slightest extent?

A. No; there is practically the same flow of gas, continuing right through into the other line.

Q. Passes right from the one line into the other, and goes right on its journey, wherever it is going?

A. And is measured while it is in motion, yes, sir.

Q. You gave us this morning the amount of gas purchased by your company. Can you give us the quantity purchased in West

869 Virginia and in Ohio and in Kentucky, respectively?

A. Yes, sir.

Q. For what period?

A. The total gas purchased in Kentucky amounted to 615,416,000 cubic feet. The total gas purchased in Ohio, 14,432,000 cubic feet. The total gas purchased in West Virginia 11,456,842,000 cubic feet.

Q. This gas thus purchased was inducted into the lines of the company and there commingled with the other gas in the lines of the company, whether produced or purchased, from one or another state?

A. It was, yes, sir.

Q. Can you give us the number of domestic consumers, the amount

of domestic gas sold, the number of industrial consumers, the industrial gas sold, the number of churches, schools and public buildings, the amount of gas sold, the total number of direct consumers—or the number of direct consumers and the amount of gas sold, from 1910 to 1919, for each year; together with the grand total of consumers and the amount of gas sold for those same years, in the state of West Virginia?

A. Yes, sir, very closely.

(Witness produces table.)

Q. What do you mean by "direct consumers"?

870 A. Direct consumers, I believe, are considered consumers in which the gas is more or less estimated,—some drilling wells and possibly free consumers who are not connected by meter.

Q. Will you please read that table into the record?

A. (Reading.)

United Fuel Gas Company.

Statement of Gas Sold in West Virginia 1910-1919.

Year.	Number domestic consumers.	Amount domestic gas sold.
1910	11,622	1,569,277,000
1911	12,886	1,766,916,000
1912	14,425	2,071,911,000
1913	17,374	2,265,318,000
1914	18,132	2,617,361,000
1915	18,447	2,583,449,000
1916	20,453	2,852,380,000
1917	21,672	3,436,965,000
1918	22,606	3,903,372,000
1919	24,520	4,198,837,000

Year.	Number industrial consumers.	Industrial gas sold.
1910	69	2,727,689,000
1911	138	2,885,793,000
1912	161	3,548,983,000
1913	111	2,720,439,000
1914	100	2,470,743,000
1915	130	2,578,349,000
1916	109	3,505,977,000
1917	110	5,169,774,000
1918	138	6,357,123,000
1919	150	6,265,795,000

871

Year.	Number churches, schools, public buildings.	Amount gas sold.
1910	169	267,375,000
1911	55	109,284,000
1912	33	55,373,000
1913	51	55,999,000
1914	69	150,173,000
1915	58	148,303,000
1916	52	231,134,000
1917	52	238,854,000
1918	52	238,710,000
1919	39	137,275,000

Year.	Number direct consumers.	Amount gas sold, est.
1910	135	615,946,000
1911	78	1,052,796,000
1912	628	3,566,635,000
1913	224	2,722,436,000
1914	63	1,439,416,000
1915	73	651,391,000
1916	44	373,573,000
1917	61	845,369,000
1918	88	615,133,000
1919	47	721,131,000

Grand Total.

Year.	Total consumers.	Grand total. Amount gas.
1910	11,995	5,182,287,000
1911	13,157	5,814,789,000
1912	15,247	9,242,902,000
1913	17,760	7,764,192,000
1914	18,364	6,677,693,000
1915	18,708	5,961,492,000
1916	20,658	6,963,064,000
1917	21,895	9,690,962,000
1918	22,884	11,114,338,000
1919	24,756	11,323,038,000

872 Q. Is the United Fuel Gas Company in any manner owned or controlled by the Standard Oil Company or any of its affiliated companies, and if so, how?

A. It is not owned or controlled by the Standard or any affiliated companies belonging to the Standard, in any way.

Q. Is the capital stock of the United Fuel Company owned by other corporations, and if so, by which?

A. The capital stock of the United Fuel Gas Company is owned

by the Columbia Gas & Electric Company and the Ohio Fuel Supply Company.

Q. Do you know whether or not the stocks of those companies, the Columbia Gas & Electric Company and the Ohio Fuel——

A. Ohio Fuel Supply Company.

Q. —and the Ohio Fuel Supply Company are listed upon the New York Stock Exchange?

A. The Columbia Gas & Electric Company stock is listed on the New York Stock Exchange, and the Ohio Fuel Supply is on the Pittsburgh, also on the New York Stock Exchange now.

Cross-examination.

Mr. Blue:

Q. The United Fuel Gas Company is a West Virginia
873 corporation?

A. Yes, sir.

Q. And engaged in public service in the State of West Virginia?

A. It is.

Q. You have said that your company has a total acreage of 806,-785 acres in West Virginia and Kentucky; how much of this acreage is in West Virginia?

A. The total acreage in West Virginia is 715,502.64 acres; the State of Kentucky, the total acreage is 91,282.89.

Q. Where is the 91,000 acres of your territory in Kentucky located—in a general way will be sufficient.

A. It is located in Boyd and Lawrence Counties principally, and some scattered acreage around through other counties in Kentucky.

Q. How much of your Kentucky acreage is operated or developed?

A. Total operated acreage in Kentucky, 4,304.1 acres.

Q. How much of your acreage in Kentucky is proven gas territory?

A. About that amount.

Q. Of your 715,000 acres in West Virginia, what proportion of it is owned by you in fee, and what proportion leasehold?

A. I would be unable to give you that.

874 Q. Part of your holdings in West Virginia you do own in fee, do you not?

A. Yes, sir.

Q. And your holdings in West Virginia, 715,000 acres in fee and under lease, how much of such holdings do you regard as proven gas territory?

A. The operated acreage of 62,336.6 acres is all that I could definitely state as proven territory, although in my opinion there is a considerable amount of it gas territory.

Q. You mean considerable of the part you have not yet operated or developed?

A. That is the unoperated territory.

Q. Is good gas territory?

A. Gas territory.

Q. If I am not too inquisitive, may I ask you your opinion as to what part or proportion of the undeveloped territory do you regard or consider as good gas territory—I mean, independently of your already developed leases?

A. I would say about 30 per cent of the total unoperated acreage, in my opinion, should be productive of gas or oil.

Q. On your direct examination, you referred to your line "A," your line from Roxalana running to and passing through, Kenova. Do you know, or can you state approximately, the number

875 of consumers you have in West Virginia on this line?

A. I would say possibly between ten and eleven thousand.

Q. Can you state accurately or approximately the number of wells on your territory feeding into this line "A"?

A. To answer that question, I would have to give you the approximate number. I would have to divide the wells in two parts—that is, these lines are connected together, and the wells can flow through either line, of these main pump lines,—line "A" and line "F."

Q. You mean, that the wells can be made to flow interchangeably between your line "A," already referred to, and your line "F"?

A. Yes.

Q. Being your line running to Ball's Gap?

A. Yes. On an estimate, I would say 200 wells.

Q. Line "A," on Exhibit Pennsylvania Exhibit 22, shows or indicates certain points at which you deliver gas to consumers in West Virginia. That line delivers gas to consumers at points other than those indicated on the map, does it not? I mean by that, at small points or small stations.

A. Yes, sir.

Q. Your line "A," from Roxalana to Kenova, as a part of

876 your system, is a public service line in the state of West Virginia, is it not?

Mr. Weil: That is objected to as incompetent, irrelevant and immaterial, and involving a conclusion of law and legal opinion. The witness not being a lawyer, or pretending to be such, the question is objected to.

The Commissioner: Note the objection and let the witness answer.

A. It has never been really clear in my mind whether it was or was not. I have always endeavored to take care of consumers along the line, by making a tap and allowing a supply of gas from the line, upon request from consumers, but I could not state definitely whether it is or is not.

Mr. Blue:

Q. The rates that you charge your consumers along that line are fixed by the Public Service Commission of West Virginia, are they not?

A. They are.

Q. And you have applied to, and have received from, the Public

Service Commission of West Virginia, an increase of rates
877 charged by your company to your consumers along that line?

A. We have.

Q. Now, when you put the gas into this line "A" from the wells you have already indicated fed into it, that gas is intended to be consumed by persons along that line, is it not?

A. That has not been the principal object in laying the line; the line was laid for the purpose of transporting gas to points outside of the state, but, as I have previously stated, we have made connections for domestic consumers along that line, and small towns.

Q. When you place the gas in this line from the wells you have indicated, you don't consign any particular part of it to any particular place, do you?

A. We endeavor to turn a certain amount of gas into that line, depending on what the temperatures are, to take care of the deliveries necessary to take care of our consumers at the different places outside of the state as well as inside of the state.

Q. But you have no particular point to which you are consigning or trying to destinate any of it, have you?

A. Yes, I know about what the demands should be at various places, and what the demand would be practically, say for gas in Cincinnati, and I endeavor,—am turning on wells and
878 starting compressors to put a supply of gas in that line sufficient to take care of those different points.

Q. Well, when you put the gas from any specific well into that line, and mingle it with the gas from other wells, you don't know where that gas is going, whether it is going to a consumer in West Virginia or a consumer out of West Virginia?

A. I do not, no, sir.

Q. And you have no way to control it—You don't control it after it enters that line, whether it goes to a consumer in West Virginia or a consumer out of West Virginia, do you?

A. I couldn't keep track of that certain gas from a certain well, no, sir—not where it went.

Q. Does your company own or control the right of way by which this line travels, and on which this line is laid?

A. We own the right of way on which such line is laid.

Q. What is the nature of your control or ownership of that right of way?

A. We have the right to lay, maintain, operate and remove the line.

Q. How did you acquire it?

A. By purchase.

879 Q. All of it by purchase?

A. I would state, to the best of my knowledge, it has practically all been acquired by purchase.

Q. Did you acquire any of it by condemnation?

A. Not that I can recollect.

Q. Your company, as a part of the system—I will ask you at

this time, has acquired rights of way by condemnation, has it not?

A. I believe so.

Q. You have that power and you have exercised it at places along your system in the State of West Virginia, have you not?

A. I believe we have.

Q. This line furnishes gas to the City of Huntington, you have stated. Does your company have a franchise in the City of Huntington?

A. We have.

Q. And under that franchise you are permitted to do what?

A. The use of certain streets and alleys to lay our lines, connect up our consumers, to distribute gas to them.

Q. When did you acquire that franchise?

A. In the year 1909.

Q. In whose name was it acquired? Did you acquire it directly from the city, or did you acquire it by taking it over from
880 some other person or corporation?

A. It was acquired at the time we purchased the United States Natural Gas Company, which was in 1909.

Q. The United States Natural Gas Company originally had the franchise from the City of Huntington, and you then took it over—took the franchise over from that company?

A. Yes, sir; at the time of the purchase.

Q. The United States Natural Gas Company was a West Virginia corporation, was it not?

A. I understand that it was.

Q. And under that franchise, it was required to furnish service of gas to the citizens and industries of the City of Huntington?

Mr. Weil: This is objected to, as requiring from the witness an opinion on a question of law, and not a statement of fact. It is therefore objected to as incompetent, irrelevant and immaterial, and not proper cross examination.

The Commissioner: Note the objection and let the wit-
881 ness answer.

A. I would take it that they obtained the franchise for that purpose, although I do not know.

Mr. Blue:

Q. And when your company took it over, it assumed the carrying out of the undertaking, did it?

Mr. Weil: Same objection.

The Commissioner: Note the objection and let the witness answer.

A. I would assume that it did.

Mr. Blue:

Q. Do you know what gas territory the United States Natural Gas Company owned, by lease, purchase or otherwise? You may answer the question in a general way, if you cannot answer specifically.

A. I couldn't give you that information. I understand that the United—It is purely hearsay with me, as I wasn't with the company at that time, but I believe the United States Natural Gas Company operated in the state of Kentucky, and piped the gas from Kentucky into the City of Huntington, to supply the
882 City of Huntington, at the time they took out a franchise there.

Q. Now, in the town of Ceredo, you furnish gas to the inhabitants there, do you?

A. We do.

Q. Under a franchise?

A. I couldn't state if we have a franchise at the present time, or whether our franchise expired.

Q. And you furnish gas to the inhabitants of the town of Kenova?

A. We do.

Q. Under a franchise?

A. Well, there are a number of our contracts or franchises that have expired, in some of those smaller places, maybe some of the larger ones, and we have not renewed the franchises; I couldn't tell you at the present time whether we have a franchise at Kenova or not.

Q. Your line "A" crosses public roads, and at places may run along with public roads, in the State of West Virginia, does it not?

A. I don't recollect of any places where line "A" runs along the county roads.

Q. It crosses county and public roads at places?

A. At places possibly it does.

Q. On your line "S," running to Ball's Gap, you have
883 consumers in West Virginia, have you not?

A. We have.

Q. And you have places where you deliver gas to consumers along line "S," not shown on Pennsylvania Exhibit 22, have you not?

A. Possibly small settlements, or an occasional consumer connected direct to the line.

Q. And you own the right of way for your line "S"?

A. We do.

Q. On your line "E" you have a number of consumers in the State of West Virginia, have you not?

A. We have.

Q. You own the right of way for that?

A. We do.

Q. That line is also part of your public service system in the State of West Virginia, is it not?

Mr. Weil: The same objection is made to this question, as to the other questions, as calling for an opinion.

The Commissioner: Note the objection and take the answer.

A. It is part of our system. As I stated before, I do not know as to the legal status it has.

884 Mr. Blue:

Q. The rate you charge your consumers on lines "S" and "E" are fixed by the Public Service Commission of West Virginia, are they not?

A. They are.

Q. And in respect to your consumers on those two lines, as well as in respect to the consumers on line "A," you have applied to the Public Service Commission of West Virginia for an increase of rates, and have been allowed an increase, have you not?

A. We have.

Q. Can you state approximately the number of wells that feed into this line "E"?

A. Possibly 153 wells, in Roane and Jackson Counties.

Q. And you own the right of way for your line "E"?

A. We do.

Q. You acquired that by either purchase or condemnation, or both?

A. I believe we acquired it by purchase.

Q. When you put the gas from any particular one of the 153 wells into line "E," you don't know where that gas is going, do you,—whether it is going to a consumer in West Virginia, or part of it to a consumer in West Virginia, or going out of the State of West Virginia?

885 A. I couldn't tell the gas from any particular well, but I know that practically all of it goes out of the state. There is a very small consumption on that line in the State of West Virginia.

Q. You have a number of towns on that line, have you not?

A. Some small towns.

Q. Are you able to state the number of consumers, or the approximate number of consumers, you have on your line "E"?

A. Approximately 698 domestic consumers, connected to that line.

Q. Which one of your lines delivers gas to consumers at and near the City of Charleston?

A. The gas is delivered to Charleston through an eight-inch line "C," and a 10-inch line "D."

Q. Where are the wells located that feed into those two lines?

A. The wells are located in Roane and Kanawha County.

Q. Are lines "A" and "S" and "C" and "D" connected, so that gas may flow from one of them into the other, and pass interchangeably through those lines, as parts of your system?

A. It can be so handled up to a certain amount of gas. The pressures on the lines referred to as line "S" and line "A,"
886 would not be sufficient to deliver the gas at all times into the City of Charleston, to meet the demand.

Q. Does the gas from the wells that feed into lines "C" and "D" feed also into either line "A" or line "S"?

A. It has been pumped into that line with compressor stations.

Q. What I am inquiring is whether or not the gas—whether it is pumped or feeds naturally—from the wells that feed lines "A" and "S," also may pass, or does pass, into lines "C" and "D," that feed the City of Charleston, or vice versa?

A. The gas from line "A" and line "S," they fed lines or supplied lines "C" and "D," leading to Charleston, to a certain extent, although, as previously stated, in cold weather the pressure on those lines would not be sufficient to meet the demands for gas in the City of Charleston. The gas from lines "C" and "D" would not feed a great deal of gas into line "S" or line "A," without the aid of a compressor station, so the gas connected to those lines is flowing into Charleston.

Q. Is your system so constructed that you can place in lines "A" and "S" gas that comes from the wells that also feed or furnish gas to lines "C" and "D"?

A. It would not be practicable to feed the wells supplying lines "C" and "D" into line "S" or line "A," although it could be
887 arranged so that this gas could be taken from the wells connected to those lines, and discharged into line "S" and line "A," through a compressor station, although it would take considerable changing.

Q. There is no connection between your line "E" and the lines that appear to run into it on the map, Pennsylvania Exhibit No. 22, to the rest of your system, is there?

A. There is no connection between line "E" and the other lines referred to as line "S" and line "A." These lines are separated by possibly 20 to 25 miles distance.

Q. The rates you charge the consumers of gas in West Virginia, on all of your lines,—some of which I have not yet asked you about specifically—are fixed by the Public Service Commission of West Virginia, are they not?

A. I believe all of the rates are fixed by the Commission. That would mean domestic consumers.

Q. On your direct examination, you gave the distance of certain of your main transmission lines. Can you state, and will you state please, the total mileage of your lines in West Virginia, excluding, however, for the purpose of this question, small well lines and the lines in cities and towns where you have franchises?

A. Excluding the smaller lines that you refer to, there would be approximately 610 miles of pipe, the larger pipe lines in the
888 state.

Q. What is the smallest line that you include in your answer?

A. That would be about 4.78.

Q. Your company has a franchise to furnish gas in the City of Charleston, has it not?

A. It has.

Q. Do you know when you acquired it?

A. No, I couldn't give you that information. It was acquired long before my connection with the company.

Q. Do you know whether that franchise was originally in the name of your company or in the name of some other company?

A. I believe we have secured franchises through purchases of other companies. This franchise was purchased from the United States Natural Gas Company in the year 1909.

Q. Do you know whether the United States Gas Company was the original owner holding the franchise, or whether it had acquired it in turn from some other corporation?

A. I understand that it acquired it from another company.

Q. There had been a local company in the City of Charleston furnishing gas to the city, and that local company, in the first instance, had acquired the franchise, had it not?

889 A. That is as I understand, from hearsay.

Q. Your company had acquired a number of franchises and a number of smaller companies before you went with the company, and the history of these matters is not in your personal knowledge. Is that true?

A. I couldn't state accurately as to what happened before I came with the company—positively.

Q. Do you know whether or not it is true that your company's properties, as they are today, represent the assembling and putting together of a number of properties that theretofore had been separate and independent properties?

A. I understand that a very small portion of the company was acquired in that company—the smaller companies, one or two.

Q. Do you mean a small portion of the leases, or do you mean a small portion of the franchises and local preferences?

A. I understand there was a considerable amount of acreage and some lines, consumers, secured.

Q. But as to the details of assembling and putting these together, you are not personally familiar and have no personal knowledge?

A. I am not.

890 Q. There are a great many small gathering lines, parts of your company's system, not shown or in any way indicated on this map, Pennsylvania Exhibit 22, are there not?

A. Yes, there is a considerable amount of small pipe leading from the wells to the lines, that is not shown.

Q. Quite a great many of them, of course, not shown here on this map?

A. I would think so, yes.

Q. On your direct examination, you stated that you delivered to domestic consumers, outside of the State of West Virginia, 1,491,447,000 cubic feet of gas. Will you state, please, the points at which you made the delivery of such quantities, to such consumers?

A. That was for the year 1919?

Q. Yes.

A. Ironton, Ohio, Ashland, Kentucky, and Catlettsburg, Kentucky, and scattered towns in Ohio and Kentucky, as well as rural consumers in both states.

Q. You stated that you delivered to industrial consumers outside of the state 2,507,654,000 cubic feet. Will you state the points at which such deliveries were made to such consumers?

A. Ironton, Ohio; Ashland, Kentucky; Portsmouth, Ohio;
891 New Boston, Ohio,—that is practically the larger amount of the gas to the points, which was delivered to industrial consumers.

An adjournment was here taken until Thursday, July 1, 1920, at 10 o'clock, A. M.

892 Thursday, July 1, 1920.

And now, Thursday, July 1, 1920, the hour of 10 o'clock, A. M., having arrived, hearing resumed pursuant to adjournment.

H. A. WALLACE recalled.

Cross-examination (resumed).

Mr. Blue:

Q. Yesterday afternoon I inquired of you the location of the industrial plants to which you delivered gas outside of West Virginia. In a general way, state the nature of such industrial plants; I mean, industrial plants to which the United Fuel Gas Company delivered gas, outside of West Virginia.

A. The United Fuel Gas Company furnishes gas outside the state to the Ashland Iron & Mining Company, of Ashland, Kentucky; the Ashland Steel Company, of Ashland, Kentucky; the Whittaker-Glessner Company, of Portsmouth, Ohio; the Portsmouth Street Railway and Light Company, of Portsmouth, Ohio; the Ashland Fire Brick Company, of Ashland, Ohio, and several smaller consumers.

Q. The Whittaker-Glessner Company is an iron and steel plant, is it not?

893 A. A steel plant, I believe.

Q. On yesterday I asked you about your lines "C" and "D", which lines you say furnish gas to the City of Charleston. Do such lines "C" and "D" furnish gas to consumers in West Virginia other than to consumers in the City of Charleston?

A. Not to any great extent; a few domestic consumers along the line, small towns, such as Elk View, Milliken, and Blue Creek.

Q. What lines furnish gas to consumers in South Charleston, Kanawha County, West Virginia?

A. The gas of South Charleston comes through the same lines.

Q. At South Charleston, Kanawha County, is located the United States projectile and machine factory or plant, and armor plant, is it not?

A. At South Charleston there is a projectile plant located, and an armor plate plant, in the way of construction.

Q. How many consumers in West Virginia do your lines "C" and "D" serve or furnish gas to?

A. In the way of manufacturing plants supplied by the two lines referred to is the Banner Glass Company——

Q. Just the number. I don't care about the names so much.

A. The two lines referred to supply 10,305 domestic consumers in Charleston and South Charleston. Also 135 industrial users of gas.

894 Q. Does the number of domestic consumers given by you include domestic consumers outside of Charleston and South Charleston?

A. Yes, sir, of this number there are 121 consumers outside the city limits of Charleston.

Q. On yesterday you spoke of Mr. H. G. Scott, President of the Charleston Industrial Corporation, relative to gas for contemplated industries at Nitro. Will you please state where Nitro is located?

A. Nitro is located on the K. & M. Railroad, about twelve miles from Charleston; also on the Kanawha River.

Q. Do you have a line running to Nitro?

A. We have a line running through Nitro.

Q. You furnish no gas to consumers of any kind at Nitro?

A. We have been furnishing gas to the government at Nitro, to be distributed by the government representatives to domestic consumers at Nitro.

Q. In a short general way, what is Nitro?

A. Nitro is, at the present time, as I understand, owned by a body of men organized for the purpose of purchasing this material and site from the government, for the purpose of building up Nitro along industrial lines, endeavoring to get large manufacturing establishments to locate at that point and build up a city, if possible.

895 Q. Nitro was built by the United States Government during the war?

A. It was.

Q. It was generally understood that the Government spent fifty or sixty millions of dollars in building a town there?

A. That is as I understand it, from hearsay.

Q. And at Nitro the Government, in addition to the plant built there, built several thousand dwelling houses, did it not?

A. I couldn't state the number of dwelling houses, but at Nitro there were a large number of them, however.

Q. There were houses there built over a space of two or three miles in length, and from half a mile to a mile in width, are there not?

A. The buildings located in Nitro I should judge cover the territory specified by you.

Q. There is housing room there in Nitro for probably 10,000 people, is there not?

A. I don't think so.

Q. Well, several thousand anyway?

A. I would say possibly two thousand.

Q. Well, whatever it is, you were furnishing gas for distribution to those houses?

A. I would say the greater part of them.

Q. And also gas for delivery to the manufacturing part of
896 that plant also?

A. To a small extent, we took care of some manufacturing, I understood, during the war.

Q. On which one of your lines is Nitro located, and from which one of your lines did you supply and deliver gas to consumers at Nitro?

A. Nitro is located near line "S," a 20-inch line, and is securing their gas from a line connecting line "S" and line "A"; so it would be difficult to tell just which line the gas came through that furnishes Nitro, although I would judge the greater proportion of it would be through the 20-inch line.

Q. Which one is the 20-inch line?

A. Line "S."

Q. What is the size of your line from line "S" to Nitro?

A. As I recollect, that line is 12-inch O. D. pipe, although there are a couple of different sizes of pipe in the line. It consists mostly of 12-inch, with a small amount of 10-inch.

Q. You mean that you have one 12-inch line from the line "S" up to Nitro, or a 12-inch and a 10-inch?

A. We have two lines connecting at this point from line "S" to line "A", commonly spoken of as a 12-inch line, although there is a small amount of 10-inch pipe in one or the other of these
897 connecting lines.

Q. Then the deliveries that you have made, are making, or may make, of gas to Nitro, comes through line "A" and line "S", and probably the larger part of it through line "S"?

A. From the field, yes, sir.

Q. Can you state approximately the number of wells, and their general location, that have supplied and do supply gas to your line "S"?

A. We have approximately 405 wells in Roane, Kanawha and Clay Counties, feeding into line "S" and line "A"; the two lines being connected together, of course; the wells feeding both lines.

Q. Line "A" and line "S" are so connected then, as I understand you, that the gas that goes into them cannot be determined as to which particular wells finally find their way into either line; is that right?

A. That is correct. Of course, this could be separated, but in the usual operating condition, the lines are connected together.

Q. Do you know when gas was first delivered, or the delivery of gas begun, to consumers along your line from Roxalana to Kanawha? I mean, deliveries to consumers in the State of West Virginia along that line?

A. I couldn't state positively what time the first deliveries
898 were made on this line, but I believe that line "A" was completed in the year 1905. This line, however, was not built by the United Fuel Gas Company.

Q. Gas was being delivered to consumers in the State of West Virginia on that line at least as far back as 1905, was it not?

A. I would say that there was gas delivered to consumers on that line in the year 1905. It couldn't have been back further than that, for the line wasn't completed until that year.

Q. How far back are you able to state that gas was being delivered to consumers in the county of Kanawha and other counties adjacent thereto, by any of the lines shown on the map, Exhibit Pennsylvania 22, as parts of your present system?

A. I couldn't state as to whether any of the present lines are the lines that formerly supplied Charleston, prior to my employment with the company, but understand that gas was supplied to the City of Charleston by the Charleston Natural Gas Company, beginning in the winter of 1893 and 1894.

Q. While probably not the same identical pipe lines, yet the lines of your system supplying consumers in the County of Kanawha are on the same rights of way, or substantially the same rights of way, as the pipe lines that supplied consumers in the County of
899 Kanawha and adjacent counties, by your predecessors—Isn't that right?

A. It is just possible that some of these lines were supplying Charleston, although there have been additional lines laid into the City of Charleston since that time, and I suppose the line—providing it was one of these lines shown on our map—had been increased in length, running farther into the field to secure a more adequate supply of gas.

Q. Well, you mean that with the increase of population in the City of Charleston, and elsewhere along these pipe lines, that you have extended your system and enlarged the pipe lines of your system, to take care of that increased consumption?

A. Yes, sir.

Q. But you are carrying out the franchises and undertakings of those who were your predecessors in furnishing to these consumers gas?

A. We are endeavoring to take care of the consumers in Charleston in the best possible manner.

Q. Now, the supplying of these consumers and the building of these lines for the purpose of supplying these consumers in West Virginia, was all prior to the construction of your lines to
900 Cincinnati, for instance, were they not—or was it?

A. I would say the original line supplying Charleston was laid before gas was supplied to Cincinnati; but the additional improvements, such as laying additional lines and extending the lines previously laid—a great deal of the work has been done since Cincinnati was supplied.

Q. But the undertaking to furnish to consumers in the County of Kanawha natural gas was an undertaking some time before any undertaking to furnish gas to Cincinnati or Louisville, was it not?

A. Gas was supplied, as I previously stated, to Charleston, by our predecessor, before gas was supplied to the City of Cincinnati.

Q. You not only supplied it, but your lines were built and the

system was installed for the purpose of supplying gas to consumers in the State of West Virginia, even before you began the construction of the line to furnish gas to Cincinnati or to Louisville; isn't that right?

A. Not by the United Fuel Gas Company.

Q. No, but by your predecessors?

A. Yes, sir; that is true, in a small manner. There was gas supplied to the City of Charleston.

Q. And your company took over the lines and system of your predecessors, and made it a part of your present system?

A. They did, yes, sir.

901 Q. On your direct examination, you referred to your line "T." It is by this line that you deliver gas to the Hope Natural Gas Company and the Pittsburgh & West Virginia Natural Gas Company. Where are the wells located, and how many of them are there which supply your line "T"?

A. A large part of the gas supplying the 20-inch line "T" is obtained from what is known as the Kanawha field in Kanawha County. The wells, in number, are between 30 and 40. I could not state exactly the number. There is also an additional supply of gas at times secured from the Roane County field.

Q. Where is connection made with your line "T," so that gas from the Roane County fields may be put into line "T"?

A. The connection is made near a point shown on the map as Cobb, in Roane County, near Clendenin.

Q. How many of your Roane County wells can you use in supplying line "T" with gas at the connection indicated by you?

A. In the Clendenin field there are approximately 405 wells, and the greater part of these wells could be used to supply this line "T."

902 Q. You use those wells interchangeably though, do you not? In other words, you can use them so as to supply line "T" or line "A" or line "S," or all three of them at the same time, if you so desire.

A. You can, yes, sir.

Q. Your line "T" is connected then with your line "A" and your line "S"?

A. There is a connection to both lines.

Q. And you can put your Kanawha field gas into either line "A" or "E" or both, as you desire, at any time?

A. No, we couldn't put the Kanawha field into line "E."

Q. You can into line "A"?

A. We can into line "A" and line "S" and line "T."

Q. If I said "E," I meant "A" and "S." In my question I meant to inquire if you could not, and if you do not, put your gas from the Kanawha field into lines "A" and "S" as well as "T" at such times as you so desire?

A. The wells in Roane County and Clay County, known as the Clendenin field, are principally used for supplying gas for delivery through line "A" and line "S"; the gas supplying 20-inch line "T," a larger proportion of it is taken from the Kanawha field, but at times there is a certain amount of gas taken from the Roane County

or Clendenin field, to add to the deliveries of gas through line "T."

Q. Gas from your Kanawha field then may find its way to
903 Cedarville, or it may find its way into your line "A," and it may find its way into line "D," or it may find its way into your line "S"; is that not true?

A. That is correct.

Q. On your direct examination you said that you understood that the gas you delivered to the Hope Natural Gas Company and the Pittsburgh & West Virginia Gas Company at Cedarville is for transportation to Pennsylvania. When you deliver your gas through your line "T" to the Hope Natural Gas Company and the Pittsburgh & West Virginia Gas Company, such gas is not consigned, or designated as consigned, to any particular place, is it?

A. Not by our company. It is merely sold to the two companies referred to at Cedarville, and the distribution of the gas after leaving that point is solely up to the two companies referred to.

Q. When you deliver your gas through line "T" to the Hope Natural Gas Company and the Pittsburgh & West Virginia Gas Company, it becomes there commingled with the common mass of gas produced and purchased by the two companies named; is that right?

A. That is correct. My idea in saying the gas came to Pittsburgh was merely a supposition, on the strength of being called up
904 in extremely cold weather by officials of the companies here at Pittsburgh, complaining to me that they were extremely short,—in part, practically out of gas for domestic consumers, and requesting me to give them more gas, if possible. And I take it for granted, under those conditions, that the gas was coming to Pittsburgh.

Q. You also know, do you not, that at the same time that complaint was coming from Pittsburgh, there was also complaint coming to them from consumers in West Virginia?

A. No, I wouldn't say that would hold true. Consumers in West Virginia are taking their gas from the line prior to the time that it would be received at Pittsburgh, and necessarily they should have a much better supply at those points than they have at the extreme end of the line here in Pittsburgh.

Q. What I have in mind, and what I meant by the question, is that the West Virginia consumer is attached to the same line of gas that you deliver to the Hope Natural and the Pittsburgh and West Virginia, that is being distributed by those companies to their consumers in West Virginia, as well as to Pittsburgh?

A. No doubt there is a certain proportion of consumers in West Virginia connected to lines belonging to the Hope Natural
905 Gas Company and the Pittsburgh & West Virginia Gas Company, into which some of our gas finds its way, but I would say that they would possibly have a good supply of gas when the consumers up here were entirely out, or almost entirely out.

Q. The point of the question I am asking you is, that the gas delivered by you to the two companies at Cedarville is in lines of the Hope Natural Gas Company and the Pittsburgh & West Virginia Gas Company delivering gas and distributing gas to consumers in

West Virginia and in Pittsburgh, and you do not know, therefore, where your gas really goes?

A. No, I couldn't state where the gas really goes after it enters their lines, although I do know in a general way that a large part of the gas comes to Pittsburgh.

Q. Well, that is only true because of the fact that the two companies that you refer to—or rather, you assume that to be true, because the two companies to whom you deliver the gas deliver a larger quantity through some mains into Pittsburgh and vicinity than they deliver from the same mains in the State of West Virginia to their consumers in West Virginia?

A. I understand it through that source, and I also put in a great number of years working for the Hope Natural Gas Company
906 and know about the route their gas takes after leaving the large compressor stations into which this gas is feeding.

Q. You stated awhile ago that the West Virginia consumer would probably get more gas than the consumer in Pennsylvania; indicating that that was true because the gas first reached the West Virginia consumer. Would that not be the natural, practical operation, and the natural and practical effect?

A. I made that statement, taking into consideration that the consumers in West Virginia were closer to the field than the domestic consumers in Pittsburgh, and adjustments could be made possibly quicker to relieve any shortage they might have in the state. In other words, if their pressure was lower, they could weight down a regulator to a certain point and get quick results, while to build up their pressure at Pittsburgh, it would necessarily take a considerable number of hours after the shortage had become acute in Pittsburgh.

Q. On yesterday you stated on direct examination that you delivered to other gas companies in West Virginia 30,515,535,000 cubic feet. Will you please state the gas companies to whom you made such deliveries in West Virginia, and the respective quantities to them?

907 A. The gas was delivered in the amounts specified in the year 1919, in this state, to the Columbia Gas & Electric Company, the Ohio Fuel Supply Company, the Hope Natural Gas Company, the Pittsburgh & West Virginia Natural Gas Company, the Charleston-Dunbar Natural Gas Company, the Falling Rock Cannel Coal Company. The amount supplied to the Columbia Gas & Electric Company was 7,301,647,000; the amount supplied to the Ohio Fuel Supply Company was 9,455,428,000; to the Hope Natural Gas Company, was supplied 7,461,440,000 cubic feet; to the Pittsburgh & West Virginia Gas Company was supplied 6,222,967,000; to the Charleston-Dunbar Natural Gas Company was supplied 55,385,000; to the Falling Rock Cannel Coal Company was supplied 18,668,000 cubic feet.

Q. The 7,301,647,000 feet delivered by you to the Columbia Gas & Electric Company was delivered at the point designated as Ball's Gap?

A. Yes, sir.

Q. The gas you deliver to the Columbia Gas Supply Company is delivered by your line "S" at Ball's Gap?

A. To the Columbia Gas & Electric Company?
Q. Yes.

A. It is principally supplied through our line "S," but an
908 additional supply can also be taken, if necessary, from line "A."

Q. You bring your gas over from line "A" to line "S," by your line A-25, as well as other connections you have between the two lines?

A. Yes, sir, if practical to do so, or necessary. But it is not the usual operating condition; the gas, as a usual thing, is transported from line "S" to line "A."

Q. The Columbia Gas & Electric Company is a West Virginia corporation, is it not?

A. It is.

Q. And it makes small deliveries of gas to consumers in the State of West Virginia?

A. I understand so.

Q. Can you state about the proportion of the gas delivered by your company to the Columbia Gas & Electric Company, delivered by it to consumers in the State of West Virginia?

A. I do not believe that any of our gas sold to the Columbia Gas & Electric Company is delivered to consumers in West Virginia.

Q. What is your answer?

A. I do not believe any of the gas sold by us to the Columbia Gas & Electric Company is being sold to domestic consumers in West Virginia.

909 Q. Where does it get the gas that it sells to consumers in West Virginia, if it sells any?

A. The Columbia Gas & Electric Company have a large number of wells in what is known as the Branchland Field. It also has some compressor stations located at Branchland and Nye, at which points they have additional wells; that is, meaning additional wells at Nye, in addition to the field they have at Branchland. To the best of my knowledge, the gas supplied to the domestic consumers in West Virginia comes from this field.

Q. The Branchland Gas Field of the Columbia Gas & Electric Company is situated in the County of Lincoln, State of West Virginia, is it not?

A. It is.

Q. The gas which you deliver to the Columbia Gas and Electric Company at Ball's Gap is commingled and mixed with the gas which the company produces itself, and then transports through its line?

A. It is, after leaving our line.

Q. The 9,445,428,000 cubic feet of gas delivered by your company to the Ohio Fuel Supply Company is delivered at the Ohio River near Ravenswood, Jackson County, is it not, by your line "E"?

A. The gas from this line is delivered to the Ohio Fuel
910 Supply Company after crossing the river, connecting with their line at the state line on the Ohio side of the river.

Q. And none of the gas delivered by you in the State of West

Virginia then, at the point indicated in your answer, is sold to consumers in the State of West Virginia by the Ohio Fuel Supply Company?

A. None that I know of.

Q. The 7,461,440,000 feet delivered by you to the Hope Natural Gas Company, and the 6,222,967,000 feet delivered by your company to the Pittsburgh & West Virginia Gas Company, are the same quantities of gas already referred to by you as delivered by your company to its line "T" at Cedarville, West Virginia?

A. It is.

Q. Where does, or where did, your company deliver the 55,385,000 cubic feet of gas to the Charleston-Dunbar Natural Gas Company?

A. This gas was delivered to the Charleston-Dunbar Company at a point near the Kelly Ax factory, in the City of Charleston, West Virginia.

Q. Are you delivering at this time any gas to the Charleston-Dunbar Natural Gas Company at any point other than at or near the Kelly Ax plant in the City of Charleston?

911 A. Not at the present time. They don't usually ask for assistance only in extremely cold weather, and they had an ample supply of gas during the warm weather; but at times when in urgent need of gas for domestic consumers, such companies as the Charleston-Dunbar Company and those small companies, make an insistent demand on us for gas, stating that they need it to take care of their domestic consumers.

Q. You have points of connection with the Charleston-Dunbar Natural Gas Company on your lines in the County of Kanawha, have you not?

A. We have not. We made this connection merely to assist them in taking care of their domestic consumers in the time that they were short of gas, as they hadn't had the foresight to lay in a supply of gas, and sufficient acreage, or drilled up a sufficient amount of gas to take care of their consumers, only in the warmer months. Immediately after the cold snap was over, I had the connection taken out, and at the present time, to the best of my knowledge, there is no connection between the two companies named.

Q. You have had a connection of your lines in Kanawha County with the line of the Charleston-Dunbar Company at or near the industrial town of Dunbar, haven't you?

912 A. Well, it is just possible that there was. I don't recollect of there being any. We have, at the request of the officials of the Charleston-Dunbar Company, endeavored to help them out of their troubles, to take care of their nearsightedness, on a couple of different occasions, and might possibly have had a connection at that point too.

Q. You also had a connection connecting your lines with the Charleston-Dunbar Natural Gas Company to supply gas for the town of St. Albans, in the County of Kanawha?

A. No, I believe not.

Q. Where is the connection of your lines with the Falling Rock

Cannel Coal Company, by which you supplied the latter company with 18,668,000 cubic feet of gas?

A. This connection must have been made to our line near Blue Creek or Bannister. I couldn't state the exact location of the connection to our line, but it was in that vicinity.

Q. To which one of your lines, as indicated on this map, is the connection made?

A. I couldn't give you that information. Either to the 8-inch line "C" or the 10-inch line "D." They are very close together, and the connection might have been placed on one or the
913 other of those lines.

Q. And to which one of your lines, as indicated on the map, was the Charleston-Dunbar connection made?

A. The Charleston-Dunbar would really be connected after the gas reached the City of Charleston through both lines; connected to one of our medium pressure lines in the City of Charleston,—a line not shown on the map.

Q. On your direct examination, you were asked the valuation of your plant in West Virginia, and as I understood you to answer, you fixed that valuation at $60,000,000?

A. Near $60,000,000, yes, sir.

Q. In making that answer, did you mean that to be the capital investment of your company in West Virginia?

A. In that investment I included the capital investment and money expended in—well, expended, and the added value for acreage.

Q. How much of the $60,000,000 is the capital investment of your company?

A. Close to $24,000,000.

Q. And what does that capital investment represent?

A. That investment represents expenditures for pipes, casing, necessary fittings for well work and construction work, acreage, right of way purchased and right of way expense, build-
914 ings, fittings, gate-valves and other materials; labor, teaming and freight, regulators, and so forth; telegraph and telephone lines, office furniture, large tools, meters, compressor stations and measuring stations, service lines; horses, wagons and autos, and drilling tools, cleaning out tools, and discount on bonds.

Q. What does the other $36,000,000 of your valuation represent?

A. Principally increased values in acreage.

Q. Do you mean the $36,000,000 represents the increased valuation of your leases on the 715,000 acres of gas territory in the State of West Virginia.

A. That was the value placed on the property by appraisal; including capital investment and the value of the leaseholds.

Q. Do you mean the $60,000,000 was the value placed by the appraisal on your leaseholds and the things represented by your capital investment?

A. Yes sir.

Q. Leaving the appraisal value of your leaseholds in West Virginia then at approximately $36,000,000?

A. Near that figure, yes, sir.

Q. In making your answer a moment ago, you used the
915 words, "Increased value of your leaseholds," or words to that effect. Will you explain, please, what you meant, and what you do mean, by such words?

A. Well, originally, when this acreage was taken up, a considerable amount of it was not known to have any great value; but from the drilling of wells and testing out the territory, and wildcat wells, and so forth, it was shown that the lands were naturally valuable for gas purposes, and necessarily increased considerably above the purchase price.

Q. And that increase by your appraisal was determined at $36,000,000?

A. Near that amount. There were other things, I suppose, taken into consideration. The lines, and so forth, being constructed through the field to various points crossing acreage, showing that there would be a ready market for the gas when drilled up, without too great an expense in constructing lines.

Q. Now, when you give this valuation of $60,000,000, made up in the way as you have indicated? do you mean that that statement of figures, of $60,000,000, is the valuation of the property as a gas property, and independently of your property as an oil property, or as inclusive of the value of your property as an oil property?

916 A. I believe there would be between four and five million dollars of that amount that should be stated as oil valuation.

Q. You mean, of the $60,000,000 of valuation?

A. Yes sir.

Q. Do you include that $4,000,000 as representative of the oil value, in the $36,000,000 of increase in valuation?

A. That would be the increase and the whole investment.

Q. Since you have referred to the oil, can you state, please, whether your company has, on its leases, any oil wells?

A. It has.

Q. State how many?

A. We have approximately 162 oil wells.

Q. Do you know what your production in oil was, in barrels, during the year 1919?

Mr. Weil: This is objected to as incompetent, irrelevant and immaterial, and not cross examination; the witness not having been interrogated with reference to the oil production. The investigation here being with reference to the export of gas from the State of West Virginia, and not with reference to the internal operation and affairs of each witness's company that appears before the Master to give testimony. Proceedings of this character, going
917 into all the details of business of every witness that is produced, would prolong this examination to a period where counsel for complainants would be compelled to ask the Supreme Court for a further extension of time, from five months to twelve months, in order to put in their testimony. The cross examination here having already gone into fields far away from any pos-

sible issue that could be involved, counsel now give notice that if this procedure is continued, and this method of consuming time in cross examination upon matters that can by no possibility have the slightest reference to any issue involved in this controversy is continued, an application will be made to the Court, as soon as possible, for an increase in the time to be allowed counsel for the complainants to complete their testimony.

The Commissioner: The objection will be noted, and the witness will answer.

A. For the twelve months in the year 1919, the total oil production amounted to 236,308.83 barrels.

918 Q. Was that oil produced on the same leaseholds referred to in your direct examination, when you stated, in response to Mr. Weil's question, the number of acres held by you in the State of West Virginia?

A. That was included in the acreage.

Q. It is on the same leaseholds—and this production of oil is on the same leaseholds you referred to in your direct examination?

A. Yes, sir.

Q. In the State of West Virginia?

A. In the State of West Virginia.

Q. What is the valuation that you place upon your gasoline rights in respect to your leases in the State of West Virginia, and the same leases that you referred to in answering Mr. Weil's question upon direct examination, as to your leaseholds, and as to the valuation of your property in West Virginia?

Mr. Weil: The same objection to this question as was made to the inquiry with reference to the oil production.

The Commissioner: Note the objection.

919 A. The valuation was placed as a whole on the company as a going concern, and I could not designate the value placed on gas for gasoline purposes.

Q. Of the gas you produce on your leaseholds in West Virginia, you do extract therefrom gasoline, do you not?

A. The larger part of it, yes, sir.

Q. Could you state how many gallons of gasoline you extracted from the gas from your leaseholds in the year 1919, in the State of West Virginia?

Mr. Weil: The same objection is made to this question as was made to the inquiry with reference to the oil production.

The Commissioner: Note the objection.

A. For the year 1919 the production of gasoline amounted to 12,932,156 gallons.

Mr. Weil: The motion is made to strike out this answer, for the reasons given in the objection; there having been no bill as yet passed by the State of West Virginia to prevent the export of gasoline from the state.

The Commissioner: Let the motion be noted.

920 Mr. Blue:

Q. And this gasoline was made from the gas produced and purchased by your company in the State of West Virginia in that year?
A. In the States of West Virginia and Kentucky.

Mr. Weil: The same motion.
The Commissioner: Note the motion.

Mr. Blue:

Q. How much of it was made from gas produced and purchased in the State of Kentucky?
A. I would be unable to answer that question.
Q. You may approximate it.
A. I would be unable even to approximate it.
Q. Can you apportion the quantities between the states of West Virginia and Kentucky approximately?
A. I couldn't even do that, as the gas from the plant in Kentucky comes from both West Virginia and Kentucky.
Q. In the statement filed by you yesterday, showing gas sold in West Virginia in 1910-1919, there is a column headed "Number Direct Consumers," for the several years, with the amounts sold for each of the several years to direct consumers. Will you ex-
921 plain, please, what the column so headed means?
A. This, I believe, is drilling wells and cleaning out wells, gas furnished for these locations, without measurement by either, and the amount of gas consumed for this purpose being estimated.
Q. Does this column include your own field service, or, in other words, the field service of your own company?
A. It does not, to the best of my knowledge.
Q. Is the quantity of gas used or consumed by your company for each of the several years in its field service shown on this statement?
A. No, it is not.
Q. Could you state approximately about the quantity of gas your company uses each year in its field service? Particularly, say for the year 1919, including your compressor stations, and other gas consumed by you in the operation of your plant?
A. The gas used for operation by the United Fuel Gas Company in the year 1919, amounted to approximately 1,380,252,000 cubic feet.
Q. This quantity includes, does it, the gas used by your company in operating its compressor stations, and all other appliances used by you in the operation of your plant?
922 A. It does.
Q. Including the drilling of oil wells?
A. Including the drilling of oil wells.
Q. Was your company delivering gas in the years 1917 and 1918 to the Columbia Gas & Electric Company, the Ohio Fuel Company, the Hope Natural Gas Company, the Pittsburgh & West Virginia

Gas Company, the Charleston-Dunbar Natural Gas Company and the Falling Rock Cannel Coal Company?

A. We were delivering gas to the Columbia Gas & Electric Company, the Ohio Fuel Supply Company, the Central Kentucky Natural Gas Company, the Louisville Gas & Electric Company, the Portsmouth Gas Company, the Hope Natural Gas Company, the Pittsburgh & West Virginia Gas Company, and the Charleston-Dunbar Natural Gas Company, during the years 1917 and 1918, but not to the Falling Rock Cannel Coal Company.

Q. And were you so delivering gas to these companies, in substantially the same quantities, as you did in the year 1919?

A. The deliveries to these companies varied to some extent. We delivered on the whole more gas to the parties mentioned during the years 1917 and 1918 than we did during the year 1919.

923 Q. When was the appraisal of $36,000,000 increase in value made and entered upon your books?

A. During the year 1918.

Q. On your direct examination you stated the average consumption of gas in the City of Cincinnati. Did you have reference to the consumption of natural gas in the City of Cincinnati?

A. I did, yes, sir.

Q. By what company was the gas delivered to the consumers upon which you base your average domestic consumption in Cincinnati?

A. That is the Union Gas & Electric Company of Cincinnati.

Q. Is that a distributing company in the city of Cincinnati?

A. It is.

Q. How many consumers of natural gas in the City of Cincinnati has the distributing company upon whose distribution you made your average consumption?

A. They have between 121,000 and 125,000 consumers; in the City of Cincinnati.

Q. Do you know whether the Union Natural Gas Company gets all of its natural gas from the West Virginia fields?

A. It does not.

Q. Does it get any of it from the West Virginia fields?

924 A. The Union?

Q. Yes.

A. The Union Natural Gas Company is supplied through the Columbia Gas & Electric Company.

Q. Where does the Columbia Gas & Electric Company get the gas it supplies to the Union?

A. From West Virginia and Ohio.

Q. On your direct examination you testified respecting reconstruction of buildings, in the event that the consumers of natural gas were deprived thereof. To what consumers were you referring in your statement?

A. I had in mind the domestic consumers in practically any state.

Q. You included the domestic consumers in the State of West Virginia, in the statement made by you, did you?

A. I did.

Q. The same conditions would apply, of course, to them, as would

apply to the consumers in any other state—the conditions that you were speaking of in your direct examination?

A. I would presume they would.

Q. The consumers of natural gas in your territory were using it, and building their houses to use it, before the lines from Kermit to Louisville and from Kenova to Cincinnati were built, were they not?

925 A. A great many of them were.

Q. The homes in Cincinnati and in Louisville were not originally built for the use of natural gas in them, were they?

A. They were practically all built, I suppose, for the purpose of using gas, as they were supplied with artificial gas, I understand, prior to the time they secured natural gas, which would be along the same lines.

Q. In other words, they did not build their houses particularly for the use of natural gas that might come from the fields of West Virginia or any other state, but were built for the use of artificial gas, if built at all for the use of any kind of gas? Isn't that right?

A. A great number of them, I suppose, were built for the use of artificial gas as fuel, but possibly have been changed to a considerable extent since securing natural gas.

Q. Are not many of these old artificial gas plants in Cincinnati and Louisville and other cities, where artificial gas was made and used, being used today in the distribution of natural gas?

A. I understand these plants—the service has been practically discontinued from them and the plants are out of commission,
926 and I suppose it would practically cost as much to put them in running order as it would to construct new plants.

Q. My question, however, is this: aren't these old plants being used now for distribution—the systems being used now, in the supplying of natural gas, so far as they have natural gas at hand, to domestic consumers?

A. The only part of the plants that are in use, to my knowledge, is the reservoir or storage that they had for artificial gas, and is possibly being used—in fact, I know is being used to some extent for the storage of natural gas.

Q. And out of those reservoirs this natural gas is going through mains that were formerly used for artificial gas?

A. I suppose, to a considerable extent.

Q. About all that has been discontinued in the use of them, and what you refer to as would have to be built, is that part referred to as retorts, isn't it?

A. I don't know a great deal about the artificial gas condition in the cities referred to, only from hearsay; hearing men interested talking and discussing it.

Q. But the homes themselves have the same gas pipes and appliances in the use of natural gas that they had formerly in the use of artificial gas?

927 A. No, I believe the appliances have been changed, to some extent.

Q. But the piping isn't? Probably the burners have, but they are constantly changing. But the pipes themselves?

A. There is a considerable amount of the pipe in use, I suppose, that was used for the artificial gas.

Q. On your direct examination you stated that your company had contracts to deliver gas to the Columbia Gas & Electric Company, the Ohio Fuel Supply Company, the Central Kentucky Natural Gas Company, the Louisville Gas & Electric Company, the Portsmouth Gas Company, the Hope Natural Gas Company and the Pittsburgh & West Virginia Gas Company. Are these contracts in writing?

A. They are in writing.

Here a recess was taken until 1:30 o'clock, P. M.

928 Thursday Afternoon, July 1, 1920.

And now the hour of 1:30 o'clock, P. M., having arrived, hearing resumed pursuant to adjournment.

H. A. WALLACE recalled.

Cross-examination (resumed).

Mr. Blue:

Q. Will you please produce them?

Mr. Weil: Counsel for the States of Pennsylvania and Ohio object to the question, and to the request for the production of these papers and contracts between the United Fuel Gas Company and these other companies, for the following reasons:

1. As incompetent, irrelevant and immaterial to any issue involved in this controversy.

2. They were merely referred to by the witness on the direct examination, as contracts having been made and in existence, and no evidence as to their contents was offered.

3. The contracts as relating to the controversy here are evidence solely res inter alios acta, and the production thereof cannot
929 be compelled in this proceeding.

4. The demand at this time for the production of these papers to be offered in evidence by the defendant upon cross examination is not proper. If the contracts are evidence at all, they can only be offered by the defendant when the defendant presents its own testimony, as its own exhibits, and the production of these papers cannot at this time, in connection with the cross examination, be compelled.

5. This is not the proper method of procedure, by which the production of these papers can be compelled.

The Commissioner: Let the objection be noted and let the witness answer.

A. Upon the advice of counsel, I feel that I should refuse to produce these contracts at the present time.

Mr. Blue:

Q. May we ask you to state on the record, by the advice of whose counsel you decline to produce the papers? We mean by that, whether by the advice of counsel for the Commonwealth of
930 Pennsylvania and the State of Ohio, or counsel for your company, or your own personal counsel?
A. Upon advice of the chief counsel of my own company.
Q. And, on the record, will you please state who that is?
A. That is Mr. R. G. Altizer.
Q. Who is also counsel for the State of Ohio?
A. He is, so I understand.

Mr. Blue: The State of West Virginia, on the record, moves the Commissioner to order the witness to produce the contracts called for, either at once, or within such reasonable time as the Commissioner may fix.

Mr. Weil: Before any reply is made to the request of counsel, I desire to ask the witness some questions with reference to this same matter.

Mr. Weil:

Q. Mr. Wallace, have you those contracts in your possession?
A. I have no contracts of that kind with me. I understand those are at the general office at Charleston, in the hands of the Secretary and Treasurer.
931 Q. Have you any copies of them here?
A. I have not.
Q. Are you the custodian of those contracts?
A. I am not.
Q. Who is?

Objected to.
(Question withdrawn.)

Mr. Weil: Objection is made to any order by the Master on the witness for the production of these papers, for the reasons already given in the objections made to the question as originally entered upon the record; for the further reason that the papers are not in the custody of the witness; for the further reason that this is not the manner provided by law for securing the production of papers to be used in evidence in any case; and lastly, for the reason that under the authority of the Master, as heretofore interpreted by the counsel for the defendant and by the Master in response to their position in opposition to views of counsel for the complainants, the Master has no such power, and any application of this kind would have
932 to be made to the Court.

Mr. Blue:

Q. Is the custodian of those papers subject to your authority?

Objected to as incompetent, irrelevant and immaterial.

The Commissioner: Note the objection and let the witness answer.

A. I have always taken it for granted that papers of this nature were in charge of our secretary and treasurer, and I could possibly be able to secure them by requesting them to deliver them to me.

Q. Do you have access to them when you desire to examine them?

A. I have.

Q. Is your treasurer—your secretary and treasurer—present?

A. He is.

Q. Who is he, and where does he live?

A. Mr. L. A. Seyffert; Charleston, West Virginia

Q. He is present in the room at this time?

A. He is.

933 Q. Are you declining to produce these contracts because you don't have them present with you, and because you are not the custodian of them, or on the contrary, because you are advised by your counsel not to produce them?

A. I am declining to produce them at the present time upon the advice of counsel.

Mr. Blue: On the statement of the witness, Mr. Commissioner, the State of West Virginia renews its motion.

Mr. Weil: And for the same reasons, objections are made. As further objection to the demand, counsel for the States of Pennsylvania and Ohio call attention to the fact that the witness upon the stand is a witness called by the States of Pennsylvania and Ohio, and the company of which he is the general manager, the United Fuel Gas Company, is not a party complainant or a party to this proceeding; that where documentary evidence is required from anyone who is not a party to the record, the production of the same cannot be required or compelled by notice either to the witness,

934 the company he represents, or to the complainants in the proceeding; that being the regular method established by law and the uniform practice of the courts, by which the production of documentary evidence can be secured, and when offered, the proper objections thereto can be made. Notice to produce can only be effective when given to the party to the litigation who has in his or its possession the papers which the notice requires to be produced. Therefore, in addition to the other objections made, any notice to the witness, who is not a party, has no effect, and cannot be regarded as a proper proceeding for requiring the production of the papers required.

Mr. Hoffheimer: We expect to be heard on this, if the Commissioner thinks it is necessary.

The Commissioner: Well, at this time, counsel for West Virginia may state their views on the propriety of the witness producing the papers under the order of the Commissioner, if such order can be made.

Mr. Hoffheimer: We have made a motion for an order to

935 produce these papers, and we have endeavored to refrain from encumbering this record with argument. In so far as it may

be proper to state on the record the grounds of the motion, we will proceed to do so as briefly as possible,—and we hope without the addition of further argument. We object, in the first instance, to the assumption which underlies the objection of the other side, that the United Fuel Gas Company are identical with the complainants in these cases. We take it that whether this witness shall or will produce these papers is a question between the examining counsel and the witness. We take it that so far as the practice with regard to notices to produce is concerned, if it be assumed that there is any right upon the part of counsel for the complainant to advise the witness not to produce, no notice to produce is necessary in any event, where a proceeding is based upon the existence of a contract, because the institution and pendency of the proceeding as such involves and assumes the production of that paper. So far as the question of relevancy or materiality is concerned, that is a question with
936 which the witness has nothing to do. So far as the particular custody or location of the papers is concerned, that is with which the witness does have something to do, and which the complainants have nothing to do, in case the witness sees fit to waive the particular inconvenience of bringing the papers here; and the objection, as we understand it, is now placed by the witness, not upon the ground that the papers are not in his custody, but that under advice of counsel he declines to produce. Now, we take it that this proceeding having been placed in court upon the existence of these very contracts, and this statute having been assailed as an impairment of the obligations of the contracts, upon that very substantial ground, we are entitled to see and have produced here these contracts which it is said are impaired under this legislation. And, putting it on a more narrow ground, the witness having testified to contracts for the sale of gas with these particular companies, we are entitled to cross examine upon the terms of that contract, or those contracts, to which he has testified in chief, and will go into
937 every phase of them, in order to sift his conscience upon the question whether the contracts are as he says them to be—that upon the narrow technical ground. If we place it on the broader ground, that they have assailed this legislation because it is an impairment of the obligations of these contracts, it goes to the very basis of these contracts. So far as the witness is concerned, so far as the United Fuel Gas Company is concerned, there is no privilege on the part of the United Fuel Gas Company, under any statute or any constitution, to withhold the production of papers. Even the privilege against incriminating oneself has been too often held not to apply to corporations. It has also been too often held that the officers or agent of a corporation have no privilege of that character against the production of the documents of a corporation which are assailed. It has too often been held that the witness has nothing to do with the question of materiality or relevancy. That comes right down to the question whether the Commissioner, under the Equity Rule empowering Masters to require the production
938 of papers, is to order the production of papers which the witness has refused to produce, not because they are not in his possession, not because they are not available, but because counsel—

who happens in one and the same instance to be counsel for his company and counsel for the state of Ohio—has advised him not to produce those papers.

The Commissioner: Let the motion and the objection thereto be noted.

Mr. Blue:

Q. I understood you to say, in substance, on your direct examination, that if your company were compelled to supply to the domestic, industrial and other consumers in West Virginia, all the gas they desired, before taking any gas out of West Virginia, in your opinion, you would, in a very short time, in cold weather especially, have no gas to transport out of the state; am I correct in so understanding?

A. In the cold weather.

Q. That is the way I stated it in my question.

A. You are correct.

Q. If your company were compelled to supply an adequate
939 supply to fill the requirements of the domestic consumers of the State of West Virginia, before taking any of the gas out of the state, what, in your opinion, would be the effect of this upon your ability to transport gas out of the state?

A. That would make a much more favorable working condition, and could be taken care of in a much more satisfactory manner. I believe the domestic consumers in the state of West Virginia could be taken care of without creating as great a hardship on the domestic consumers being supplied outside of the state.

Mr. Weil: The question is objected to, and particularly the answer, and motion is made to strike it from the record, because under the bill in controversy here, by its express terms, adequate supply must be given, not only to domestic consumers, but to industrial consumers and others; and therefore the question is purely theoretical and does not apply to the issues before the Court.

The Commissioner: Let the motion be noted.

940 Mr. Blue:

Q. Then under the condition stated in the last preceding question, you would be able to transport gas outside of the State of West Virginia?

Mr. Weil: This question is objected to for the reasons given in the preceding motion; the Act of the Legislature being just as mandatory to supply industrial and other consumers as domestic.

The Commissioner: Let the objection be noted.

A. Under present conditions, we would be able to transport gas out of the state, after supplying the domestic consumers in West Virginia, providing we were not called on to take care of the industrial consumers and other smaller companies demanding gas in the cold weather.

Redirect examination.

Mr. Weil:

Q. Mr. Wallace, you answered counsel with reference to supplying domestic consumers; I suppose you mean the domestic consumers upon your own lines?

A. Domestic consumers on our own lines, yes, sir.

941 Q. And not all the domestic consumers in West Virginia?

A. No. I called attention to supplying smaller companies who were supplying the other consumers.

Q. Now, when your company, the United Fuel Gas Company, in 1909, as you stated, purchased the property and lines of the United States Natural Gas Company—You stated that?

A. I did.

Q. And at that time the United States Natural Gas Company had a certain amount of territory and production in Kentucky and West Virginia?

A. It had.

Q. I believe you stated, in answer to a question of counsel, that the gas that supplied Huntington, West Virginia, by the United States Natural Gas Company came from its Kentucky fields?

A. That is as I understand.

Q. Did the United States Natural Gas Company, at the time that the United Company took it over, have its line to Portsmouth, Ohio?

A. It did.

Q. At that time, when you took it over?

A. Yes, sir.

Q. And was supplying gas, was it, to Portsmouth?

A. To Portsmouth; yes, sir.

942 Q. And the gas that was being supplied to Portsmouth, Ohio, and the intermediate towns along the lines, do you know where that gas was produced by the United States Natural Gas Company?

A. As I understand it, part of it was being produced in West Virginia and part of it in Kentucky.

Q. Now, you were asked a number of times by counsel on cross-examination, and you stated that the gas which you deliver from your 20-inch line "T" to the Hope Natural Gas Company and the Pittsburgh & West Virginia Gas Company was being transported to Pennsylvania, and they asked you how you knew whether any of that gas went to Pennsylvania or not,—what do you know as to the quantity of gas which you deliver to those companies respectively being more than they require for the supply of their consumers en route between Cedarville and Pennsylvania?

Mr. Blue: This question is objected to by West Virginia, for the reason that the witness is to state facts and not his conclusions.

The Commissioner: Note the objection and let the witness answer.

943 A. From the knowledge that I have of the Hope Natural Gas Company's markets in West Virginia, through being employed by the Hope Natural Gas Company for a great

many years, and keeping in touch with their operations to a certain extent since leaving the company, I know that we have supplied the company with more gas through line "T," and delivered to them at Cedarville, than would take care of the domestic consumers they have in the state.

Q. And what do you say as to the Pittsburgh & West Virginia line?

A. While I never was employed by the Pittsburgh & West Virginia Company, I know considerable about their operations and their markets, and I would make the same reply relative to the amount of gas used for the domestic market in West Virginia—that we supply the Pittsburgh & West Virginia Company more gas at Cedarville than would amply take care of all domestic needs at any time in the State of West Virginia.

Q. You testified with reference to an estimate—or appraisement, I think you put it—that had been made on the property of the United Fuel Gas Company, of about $60,000,000; I wish you would state the purpose for which that appraisement was made, why that appraisement was made, and why that appraisement was entered upon the books, as you have testified.

944

Mr. Blue: The State of West Virginia objects to this question as immaterial and irrelevant and as improper redirect examination.

The Commissioner: Note the objection and take the answer.

A. I understand this appraisal was made to obtain a fair and just valuation of the United Fuel Gas Company's holdings at that time, for the purpose of Federal tax matters, so as to obtain a correct idea as to the depletion and depreciation on the property for Federal tax reports in the future.

Mr. Blue:

Q. Was this appraisal also made for the further purpose of its use in the obtaining of increased rates for consumers of gas in the State of West Virginia?

A. I had really nothing to do with this appraisal. I understood it was made for the purpose I just stated.

Q. Such appraisal was also introduced at considerable length, and was made a very large part of your evidence, or the evidence of your company, in its application to the public Service Commission of West Virginia, for an increase in the rates charged by your company, and to be charged by your company to consumers of gas in West Virginia, was it not?

945

A. I believe it was used in a recent case.

Q. You introduced a number of witnesses in support of that appraisal, did you not, in the hearing before the Public Service — of West Virginia, on an application for increase of rates to consumers in that state—in respect to this appraisal?

A. I believe we had some witnesses introduced.

Q. In fact, you know that you did have——

A. Yes.

Q. —witnesses before the Commission in support of this appraisal in your application to the Public Service Commission of West Virginia for an increase in rates for natural gas furnished by you to your consumers in that state?

A. They were used in that case, although the appraisal was primarily taken for the purpose stated, and was used also in the recent rate case.

The Commissioner: The witness, Mr. Wallace, is now excused for the time being, but it is understood that he is subject to recall in case it is deemed necessary.

946 JOHN B. CORRIN, recalled.

Direct examination.

Mr. Weil:

Q. When you were on the stand before, Mr. Corrin, you were asked to produce a statement of the lines of the Hope Natural Gas Company and the Reserve Gas Company, and the sizes of those respective lines. Have you obtained such information, and are you now prepared to give that?

A. I have, and I am.

Q. Will you just state that then?

A. (Reading:)

Lines of Hope Natural Gas Company.

H-1, Eight and Ten inch, Hastings to Round Bottom, via Glover, completed in 1902.

H-2, Eighteen inch, Hastings to Round Bottom, via Brinkmeier, completed in summer of 1902.

H-3, Eighteen inch, Hastings to Clarington, completed December, 1907.

H-4, Twenty inch, Hastings to Clarington, completed in December, 1913.

H-6, Sixteen inch, Hastings to Glover and Brave, completed in 1903.

H-8, Twelve inch, Hastings to Brinkmeier, completed in 1902.

H-9, Eight inch, Hastings to Sistersville and Paden City,
947 completed in 1903. (Five six-inch branch lines.)

H-17, Sixteen inch, Wilsonburg to Wright to Lemley, completed in 1903 and 1904.

H-28, Ten inch, Wilsonburg to Wright to Lemley, completed in December, 1911, and December, 1913.

H-39, Twelve inch, Hawkins to Wade, purchased from Fayette County Gas Company May 1, 1910.

H-45, Sixteen and Twenty inch, Cove Lick to Hastings via Fink Station, completed in December, 1911.

H-45 extension, Sixteen and Twenty inch, Cove Lick to Hastings via Fink Station, completed in April, 1913.

H-51, Eight and Ten inch, Schultz to Williamstown, purchased from Mountain State Gas Company April 1, 1910.

H-52, Ten inch, Schultz to Parkersburg, purchased from Mountain State Gas Company, April 1, 1910.

H-54, Schultz to Cokeley Farm, Eight inch, purchased from Mountain State Gas Company, April 1, 1910.

H-55, Ten inch, Craig to Schultz, purchased from Mountain State Gas Company April 1, 1910.

H-100, Fourteen and Sixteen inch, Cedarville to Cove Lick,
948 completed in April, 1917.

H-106, Twenty inch, Hastings to Clarington, completed March, 1918.

H-854, 5 3/16 inch, from H-9 to Paden City, completed December, 1909.

Lines of Reserve Gas Company.

R-1, Twelve and Sixteen inch, Dry Fork to Boaz, completed in 1902.

R-5, Twelve inch, Kennedy Station to Schultz, completed December, 1908.

R-24, Sixteen inch, Dry Fork to Boaz, completed November, 1914.

Q. You were asked to give us the number of domestic and industrial consumers of the Reserve Gas Company, from 1910 to 1919. Have you prepared that data?

A. I have.

Q. Will you please state what they were?

949 A. (Reading:)

Reserve Gas Company.

Number of Domestic and Industrial Consumers.

Year.	Domestic.	Industrial.
1910	227	10
1911	246	7
1912	288	17
1913	330	19
1914	373	11
1915	386	20
1916	414	22
1917	459	33
1918	448	33
1919	521	49

Q. You were also asked to obtain for us the total acreage and wells, and the territory developed and undeveloped, of the Reserve Gas Company for each year from 1910 to 1919. Have you prepared that data?

A. I have.

Q. Will you please state those figures?
A. (Reading:)

Reserve Gas Company.

Total Acreage and Wells—Developed and Undeveloped.

Year.	Producing wells.	Acreage operated.	Acreage unoperated.
1910	275	30,043.52	25,644.74
1911	304	31,731.98	23,802.18
1912	343	33,076.14	22,395.46
1913	397	35,265.85	20,211.25
1914	443	38,236.07	17,268.53
1915	475	40,014.63	15,639.715
1916	545	42,837.11	12,900.745
1917	639	46,076.56	89,699.925
1918	691	48,647.32	7,375.405
1919	740	51,467.82	4,663.875

950 Q. You were also asked to prepare for each year from the year 1910 to 1919 the quantity of gas produced by the Reserve Gas Company and the quantity purchased by the Reserve Gas Company during each of those years, and the total. Have you prepared that data?
A. Yes sir.
Q. Will you state what that was?
A. (Reading.)

Reserve Gas Company.

Gas Produced and Purchased.

Year.	Gas produced.	Gas purchased.	Total.
1910	9,657,785 M.	643,063 M.	10,300,848 M.
1911	9,611,527 M.	1,840,062 M.	11,451,589 M.
1912	12,643,378 M.	1,810,742 M.	14,454,120 M.
1913	19,513,482 M.	2,757,120 M.	22,270,602 M.
1914	21,080,238 M.	5,240,737 M.	26,320,975 M.
1915	21,172,149 M.	3,223,286 M.	24,395,435 M.
1916	29,752,951 M.	2,895,368 M.	32,648,319 M.
1917	31,161,590 M.	2,154,866 M.	33,316,456 M.
1918	29,219,199 M.	1,259,944 M.	30,472,143 M.
1919	20,911,446 M.	1,267,373 M.	22,178,819 M.

Q. You were also asked to have prepared the quantity of gas supplied to domestic, industrial and free gas consumers and the
951 company's operations for each year from 1910 to 1919. Have you prepared that data?
A. Yes sir.
Q. Will you state what they were?
A. (Reading.)

Reserve Gas Company.

Gas Supplied to Domestic, Industrial and Free Gas Consumers and Company Operations.

Year.	Domestic consumers.	Industrial consumers.	Free gas consumers.	Company's operations.**
1910	36,902 M.	103,817 M.	57,892 M.	321,819 M.
1911	38,466 M.	78,522 M.	75,857 M.	192,575 M.
1912	45,499 M.	92,175 M.	90,362 M.	336,849 M.
1913	45,565 M.	89,294 M.	100,395 M.	532,308 M.
1914	58,286 M.	42,334 M.	118,185 M.	583,607 M.
1915	59,599 M.	87,931 M.	133,229 M.	691,364 M.
1916	67,897 M.	124,874 M.	146,989 M.	1,138,185 M.
1917	73,418 M.	112,905 M.	151,474 M.	1,473,844 M.
1918	82,605 M.	315 M.	154,767 M.	1,289,143 M.
1919	78,429 M.	... M.	139,063 M.	1,235,769 M.

952 Q. You were also asked to have prepared the deliveries of gas other than domestic, industrial and your own operations, for each year from 1910 down to 1919, inclusive, and the parties to whom the same was delivered. Have you prepared such a statement?

A. I have.

Q. Will you please give us those figures?

A. (Reading.)

Reserve Gas Company.

Deliveries of Gas Other Than Domestic, Industrial and Own Operations.

To Union Natural Gas Corporation.

Year.	Sugar Grove.	Athens.	Total.
1910	3,498,047 M.	415,858 M.	3,913,905 M.
1911	4,633,173 M.	516,281 M.	5,149,454 M.
1912	6,068,363 M.	561,133 M.	6,629,496 M.
1913	9,110,993 M.	514,483 M.	9,625,476 M.
1914	11,821,503 M.	559,323 M.	12,380,826 M.
1915	10,838,809 M.	466,575 M.	11,305,384 M.
1916	11,950,990 M.	398,796 M.	12,349,786 M.
1917	12,502,217 M.	308,532 M.	12,810,749 M.
1918	11,781,288 M.	271,459 M.	12,052,747 M.
1919	9,358,871 M.	264,472 M.	9,623,343 M.

** Includes small amount of gas for drilling operations of outside operators.

Year.	Northwestern Ohio Gas Co.	River #2.	Ohio fields.	Hope at Wilsonburg.	Total.
1910	3,598,103 M.	10,739 M.	64,843 M.	2,245,899 M.	5,919,584 M.
1911	3,814,692 M.	10,561 M.	.....	2,167,319 M.	5,992,572 M.
1912	4,285,096 M.	41,133 M.	.....	3,023,872 M.	7,350,101 M.
1913	4,663,933 M.	40,667 M.	.....	7,273,299 M.	11,977,959 M.
1914	5,213,506 M.	49,557 M.	.....	7,992,859 M.	13,255,922 M.
1915	5,196,789 M.	65,290 M.	.....	6,948,236 M.	12,210,315 M.
1916	5,296,766 M.	69,274 M.	.....	13,601,537 M.	18,967,577 M.
1917	6,347,845 M.	85,273 M.	.....	12,412,422 M.	18,845,540 M.
1918	6,059,661 M.	86,635 M.	.....	10,901,037 M.	17,047,333 M.
1919	5,709,498 M.	87,006 M.	.....	5,444,774 M.	11,241,278 M.

Year.	Clarksburg Light & Heat Co.	Pittsburgh & W. Va. Gas Co.
1910	4,821 M.	.....
1911	.....	.....
1912	.....	.....
1913	.....	.....
1914	.....	.....
1915	.....	40,842 M.
1916	.....	.....
1917	.....	.....
1918	.....	.....
1919	.....	.....

954 Q. You were also asked to prepare, as to the Reserve Gas Company, the quantity of gas sold in 1919, and how the same was distributed, to domestic consumers, industrial consumers, and to other companies. Have you prepared those figures?

A. I have.

Q. And also like figures as to the River Gas Company?

A. Yes, sir.

Q. Will you give those to us?

A. (Reading:)

Reserve Gas Company.

The Reserve Gas Company, during 1919, sold 22,178,819,000 cubic feet of gas.

This amount of gas was distributed as follows:

78,429,000 cu. ft. sold to domestic consumers.

1,235,769,000 cu. ft. sold to industrial consumers.*

9,623,343,000 cu. ft. sold to Union Natural Gas Corporation.

At Sugar Grove: 9,358,871,000 cu. ft.

At Athens: 264,472,000 cu. ft.

11,241,278,000 cu. ft. sold to Hope Natural Gas Company.

For Northwestern Ohio Gas Co., 5,709,498,000 cu. ft.

For The River Gas Company, 87,006,000 cu. ft.

At Wilsonburg meter, 5,444,774,000 cu. ft.*

955 The River Gas Company.

The River Gas Company, during 1919, sold 1,778,257,000 ft. of gas.

This amount was distributed as follows:

930,656,000 cu. ft. sold to domestic consumers.

835,119,000 cu. ft. sold to industrial consumers.

12,482,000 cu. ft. sold to Amesville Gas Company, under contract.

The gas sold by The River Gas Company (1,778,257,000 cu. ft.) was secured as follows:

470,436,000 cu. ft. from its own wells and contracts.

1,307,821,000 cu. ft. purchased from Hope Natural Gas Company.

The River Gas Company sold to the Hope Natural Gas Company, during the year 1919, 323,323,000 cu. ft. of gas.

Cross-examination.

Mr. Steptoe:

Q. Whom do you refer to as "Free Gas Consumers"?

A. They are lessors, or the successors of lessors, who own the lands

*The gas sold for Industrial Purposes, includes gas used for drilling and cleaning out tools of Reserve Gas Company, for drilling and cleaning out tools of other companies, largely the Hope Natural Gas Company, and for gas used in operation of Reserve Gas Company compressor stations and gasoline plants.

we have under lease—these leases—entitling them either to a certain amount of gas, or gas for certain purposes, by the terms of the lease, and this gas is given to them either from a well or from a pipe line, for heating or lighting in their homes, on the lands where the wells are drilled.

Q. Does it include any gas delivered to public institutions,
956 or local communities in return for franchises, as in the case of the Flaggy Meadow?

A. It does not, no, sir—all land owners. There are one or two—I will qualify that by saying there are one or two public institutions, but that is because we have wells on a County Farm; we have a lease on the County Farm in Harrison, under which we furnish free gas to the County Farm.

Q. That is what is commonly known as the Poor Farm?

A. Yes, sir.

Q. Three miles out of Clarksburg?

A. Yes, sir; we have wells on that farm.

T. O. SULLIVAN recalled.

Direct examination.

Mr. Weil:

Q. I call your attention to your testimony on page 234 of the printed record, in which the record shows that you stated the amount of gas sold to Industrial consumers during the year
957 1919 did not include gas used in company operations on the wells, compressor stations, and so forth?

A. Since having that checked up, I am informed that it did not include gas used for that purpose.

Q. And on page 240 of the printed record, the same statement was made by you as to the inclusion of field operations?

A. It was, after I had asked to have the matter looked up and had been informed that it did include those wells; but since having it checked up again, I find that the party who informed me that it did was mistaken, and that it did not include those wells.

Q. Now, in your answer on page 267, you stated that during the year 1919, the Hope Natural Gas Company used for its operations in the field, drilling, pumping wells, and so forth, 1,078,834,000 cubic feet of gas; it also used in connection with compressing stations, and so forth, during the year 1919, 3,887,660,000 cubic feet—a total used by the Hope Company in the year 1919, of 4,966,500,000 cubic feet. Do you wish to correct those figures?

A. I do. The total, as given, 4,966,500,000 cubic feet, is correct, but the divisions as between drilling, pumping and cleaning out wells, and gas used in Hope Compressing stations, and so
958 forth, are incorrect; one amount which should have been included under the heading of "Drilling, Pumping and Cleaning out," being included in the other item of "Gas Used in the Compressor Station."

Q. Will you give us the actual figures?

A. The correct figures under those headings are: 1,529,848,000 cubic feet used for drilling, pumping and cleaning out wells, and 3,436,652,000 cubic feet used in compressing stations, and so forth, making the total the same.

Hearing was here adjourned until Friday, July 2, 1920, at 10 o'clock a. m.

959 Friday, July 2, 1920.

And now, Friday, July 2, 1920, the hour of 10 o'clock, A. M., having arrived, hearing resumed pursuant to adjournment.

JOHN B. TONKIN, a witness produced on behalf of the Complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Weil:

Q. Mr. Tonkin, where do you live?

A. Pittsburgh.

Q. And your business?

A. Vice president and general manager of the Peoples Natural Gas Company.

Q. You have held that position how long?

A. Two years yesterday.

Q. And prior to that time, what experience had you had in the natural gas business?

A. Well, for the sixteen or seventeen years prior to that, I was treasurer of the Hope Natural Gas Company, the Reserve Gas Company, the Connecting Gas Company, the River Gas Company, and the Marion Oil Company. Prior to that I was general bookkeeper for the East Ohio Gas Company and the Hope Natural Gas Company; and prior to that, I was in the purchasing department, and before that I was in field work, a short time in the field, for the River Gas Company.

960

Q. Are you thoroughly familiar with the operation of natural gas companies, both in the field and in connection with their office management and operation?

A. Well, I have been in it for twenty-six years, and I ought to know a little something about it.

Q. What territory does the Peoples Natural Gas Company supply with gas?

A. Well, it supplies Pittsburgh and vicinity; along the Pennsylvania main line, as far east as Altoona—or a little farther than that—Juniata. And it supplies some of the Allegheny Valley towns, and west as far as the Ohio State line.

Q. Has the Peoples Natural Gas Company any gas territory and wells?

A. Yes, sir, it has.
Q. And where are they situated?
A. Well, they are located in Clarion County, Pennsylvania, Armstrong County, Indiana County, Westmoreland County, Allegheny County, Greene County, a little in Jefferson, Washington County, and Fayette County. It has no wells in Fayette County,
961 however.
Q. That is in Pennsylvania?
A. In Pennsylvania.
Q. All of that is in Pennsylvania?
A. Yes, sir.
Q. Has it any gas territory in West Virginia?
A. None whatever.
Q. And has no gas territory in any other place than that——
A. No other state, and no other counties, except what I have mentioned.
Q. How many wells has it?
A. It has 1,108. This is February 29, 1920,—it had 1,108 gas wells, 37 oil wells and a part interest in 22 other oil wells.
Q. What was the amount of its gas production for 1919?
A. The gas production of the peoples Company for the year 1919, was 12,325,680,000 feet.
Q. And what was the amount of gas purchased by it in 1919?
A. We purchased in Pennsylvania 6,948,119,000 cubic feet; and in West Virginia, 6,496,994,000 feet. This was an abnormal amount of gas to be purchased in Pennsylvania, due to the McKeesport field, which gave us a temporary supply from that source.
Q. Can you have prepared for us, or have you had pre-
962 pared, the amount of gas produced and purchased in the various states by your company, from 1910 to the end of 1919?
A. I had this memorandum made only from 1916 on. I can have the statement prepared from 1910 on.
Q. You have it from 1916?
A. From 1916 on, yes, sir.
Q. Well, give us those figures then from that period.
A. In the year 1916, gas produced, 13,250,056,000 gas purchased, Pennsylvania, 1,448,496,000. Gas purchased, West Virginia, 26,-251,185,000. In 1917, gas produced, 14,144,931,000; gas purchased, Pennsylvania, 1,453,773,000; West Virginia, 23,276,116,000. In 1918, gas produced, 13,955,618,000; gas purchased, Pennsylvania, 1,269,314,000; gas purchased, West Virginia, 18,206,928,000. Shall I repeat 1919?
Q. Yes, so as to have it all in order.
A. 1919, gas produced, 12,325,680,000; gas purchased, Pennsylvania, 6,948,119,000; gas purchased, West Virginia, 6,496,-994,000.
Q. You stated that your purchase last year, 1919, was abnormal, on account of the development in the McKeesport field?
A. I did.
Q. What is the condition in the McKeesport field now, as to the

quantity of gas obtainable therefrom? That is, what pro-
963 portion has it gone off, would you say?

A. Well, our highest day last fall, after the field was first new, we got 64,000,000 feet, as high as 64,000,000 feet a day. Today, we run between five and six million.

Q. You are not getting then a tenth?

A. Not a tenth—less than a tenth.

Q. That amount that you are securing now from the McKeesport field, you get it from the natural flow, or do you have to use compressing stations?

A. We have been building a compressing station, and we have half of it in operation at the present time. We started about two or three weeks ago, so that we are pumping gas now.

Q. What is your total number of consumers? Have you collated that?

A. This is for——

Q. For 1919.

A. They have given me that February 29, 1920, and there has been very little change. Will that be satisfactory?

Q. All right.

A. 84,063.

Q. That is the total number of consumers?

A. The total number of consumers.

Q. And of this number, how many are in West Virginia?

A. None.

964 Q. And are there any in any other state than Pennsylvania?

A. These consumers are all in Pennsylvania.

Q. You have no West Virginia consumers at all?

A. No, we have not.

Q. Have you those figures as to the number of consumers for several years past?

A. No, I have not.

Q. What was the amount of gas supplied by your company to these consumers, separating it into domestic and industrial?

A. During the year 1919, we supplied to domestic consumers 9,654,042,000; to manufacturers, 12,264,921,000; and to other gas companies, 3,749,983,000, making a total of 25,668,946,000.

Q. Did your company ever own any gas territory in West Virginia?

A. We never did.

Q. Has your company any lines laid in the State of West Virginia?

A. We have lines laid to the state line—not in West Virginia.

Q. And at what points?

A. The point called Brave, in Greene County.

Q. And at any other point?

965 A. There are two small connections that are not delivering any gas—haven't been for some time—I guess up in Washington County, where we did get some gas from West Virginia, from their Brooke County Field, but there has been no gas delivered there for some time.

Q. You have those connections there?
A. The connections are there; yes, sir.
Q. Are those connections on the Pennsylvania or on the West Virginia side?
A. One is at Eldersville, Pennsylvania. It is right about on the state line. The other one I think the meter sets in Pennsylvania; it is right near the state line.
Q. From whom do you receive the gas that you purchased in West Virginia?
A. We purchase gas from the Hope Natural Gas Company.
Q. And that is delivered to you at the present time at Brave Station?
A. Yes, sir.
Q. Where is that gas measured?
A. It is measured at Brave Station.
Q. Is it measured by you at Brave Station, or by the Hope Company?
A. Measured by the Peoples Company. Well, I believe we do have a man on that station.
966 Q. That is on the Pennsylvania side of the line?
A. Yes, sir.
Q. In order to refresh your memory, Mr. Tonkin, haven't you a connection at a place called Glover?
A. Oh, yes, we have. Glover Station, in West Virginia.
Q. You have a connection there with the Hope Natural Gas Company?
A. Yes, sir.
Q. And they deliver some gas to you there?
A. Gas is delivered there from Hastings Station.
Q. You also have a connection, have you not—what you call a couple of local meters near the state line?
A. Yes, sir, we have, down near Brave.
Q. And also you have a connection in Brooke County, have you not?
A. That is the one I spoke of before.
Q. You did mention that?
A. Yes, sir; that is where we get gas from the Hope from their Brooke County field.
Q. Will you give us a list of the towns or cities to which you supply gas?
A. Will this do, without calling them all off? (Producing paper.)
Q. Well, I want this on the record. Just read it off, give
967 us the names.
A. Adamsburg, Altoona, Ardmore, Arnold, Avonmore, Bellevernon, Blairsville, Bolivar, Boston, Buena Vista, Burgettstown, Candor, Carnot, Clarksburg, Cresson, Delmont, Derry, East McKeesport, Edgewood, Eldersville, Eldora, Enon Valley, Export, Fair Hope, Fayette City, Florence, Glendale, Greenock, Greensburg, Haffey—called Milltown, Harper's Corners, Harrison City, Heidelberg, Imperial, Industry, Jeannette, Juniata, Kingsville, Larimer, Latrobe, Ligonier, Livermere, Logan's Ferry, Loretto, Manor, Midland, Monessen, Monroeville, Murrysville, New Florence, New Kensington,

North Bessemer, North Irwin, Pittsburgh, Portage, Rankin, Salina, Saltsburg, Sankertown, Southwest Greensburg, Spring Church, Summit, Swissvale, Turtle Creek, Unity, Valley Station, Vanport, Verona, Webster, Westmoreland City, Wilkinsburg and Woodlawn.

Q. Have you ever made any calculations as to the population of the district supplied by you? I don't mean the number of consumers, but the whole population of the district. Have you ever had that called to your attention?

A. No. It would be hard to do that, for the reason that we
968 only supply part of Pittsburgh. No, I have never made those calculations.

Q. Some of the other towns supplied by you, such as Altoona,—what is its population, or do you know?

A. I don't know. I imagine it is about fifty-five or sixty thousand.

Q. And Greensburg,—you supply Greensburg?

A. Yes, sir. From looking at it, I would figure it was about fifteen or twenty thousand.

Q. Well, you have a number of such towns and cities on your list?

A. Oh, yes.

Q. Have you not?

A. We have.

Q. Ranging from 10,000 up to cities as large as Pittsburgh, of which you supply only a part of the city?

A. We have.

Q. What efforts have your company been making in the last few years to obtain additional gas supplies in Pennsylvania?

A. Our drilling tools have been more active in the last few years than at any time in the history of the company.

Q. Have you sought other fields?

A. We have.

Q. Have you had a corps of experts out seeking other gas fields?

969 A. We always have a number of men that are employed in that business; yes, sir.

Q. And who do nothing else?

A. Who do nothing else.

Q. What was the acreage in Pennsylvania that you consider developed and what undeveloped?

A. Well, we have 85,819.65 acres of operated territory. We have 302,559.48 acres of unoperated territory, as of December 31, 1919.

Q. And how much of that unoperated territory is regarded as what you would call proven territory—any of it?

A. Oh, yes. We call the operated only those farms which actually have wells on them. There is a good deal of unoperated territory that lies between production that looks as if it was certainly productive, if developed.

Q. A great deal of that is acquired, is it not, and unoperated, for the protection of wells that are being operated?

A. Yes, sir.

Q. And is territory surrounding operated wells?

A. It is.

Q. Would it be considered wise operation, or intelligent operation, of a company, to drill all of that territory?

A. No, it would cost a lot of money to do it, and you can
970 get the gas out with the wells that you have at present, in most instances.

Q. As a matter of fact, is your company operating all of the territory that it considers good business judgment and intelligent operation to drill at the present time?

A. We are doing everything we can to keep up our supply, yes, sir.

Q. And how many wells did you drill last year?

A. They have omitted it from this statement. I will have to get you that figure. About 130 or 137, I am not sure which.

Q. From 130 to 137 wells?

A. Yes, sir.

Q. And what did those wells cost you—at what expenditure?

A. They cost us $1,034,388.37.

Q. How does your production from your property in Pennsylvania compare with the production in previous years, not only in amount, but with reference to the wells, as indicating the drainage or want of drainage of the territory?

A. Our production fell off between 1918 and 1919 about 11 per cent, even with the additional wells.

Q. Notwithstanding the drilling of all those additional wells?

971 A. Yes, sir.

Q. And the expenditure of over a million dollars?

A. Yes, sir.

Q. What did you observe with reference to the wells that were drilled in operated territory, as to their capacity, as compared with wells of the same capacity drilled in previous years?

A. The average open flow was smaller on the wells drilled in 1919 than those drilled in 1918; and 1918 was smaller open flow than it was in 1917, and so on. It has been coming down for some time.

Q. And what does that indicate to you, with reference to the drainage of that territory?

A. It indicates the gradual exhaustion of the gas.

Q. How long, at the present rate of consumption, notwithstanding the drilling of from 100 to 200 additional wells a year—where they could be drilled—what percentage of decline would you estimate would take place from this time on, in your production of gas?

A. Well, perhaps a decline of 15 per cent a year, something like that.

Q. And that, notwithstanding the most active operations in the drilling of additional wells, regardless of the question of ex-
972 pense?

A. That is true.

Q. Of course, that is only an estimate. You have nothing absolutely definite on that?

A. Well, I was figuring on the experience of the last few years in making that estimate.

Q. Isn't it the fact that after you get around to the bottom end of a decline, that the decline is very much more rapid?

A. Well, the decline has been quite rapid in the last five years.

Q. What do you know as to the adaptation of houses and appliances in sections where you supply gas for the use of gas?

A. You mean, as to houses built for the use of gas only?

Q. Yes.

A. Well, it seems that there are a good many of them, I can't estimate how many, that have been built with flues that will accommodate gas only. In order to burn coal, you would have to reconstruct the flues in their houses and change over to other appliances, of course.

Q. Well, is that to any considerable extent?

A. It is. And in houses that would probably surprise you, that they have been built that way. A great many of the very good class of houses are constructed in that way. People when they
973 built them figured that they would always have gas. They had always had it before and never thought about the decline in the fields.

Mr. Hoffheimer: I move to strike out the statement of the witness that the builders of these houses felt or thought that they would always have a supply of gas, as a mere opinion, and as irrelevant.

The Commissioner: Note the motion.

Mr. Weil:

Q. Is this true throughout the whole section where you supply gas, or is it only in particular localities?

A. Well, I believe it is true throughout the whole section, except possibly some towns that we recently went into. It probably would not be as true in Altoona and Juniata, for instance, where their houses were constructed long before natural gas was thought of for that community.

Q. Otherwise, you would say that that was general?

A. That is general throughout the gas territory.

Q. What about appliances that are used for burning natural gas? If they had to change to other fuel, would they have to change those appliances?

A. They would, unless they switched over to artificial gas.
974 Q. And what would you estimate would be the average cost to change the appliances from natural gas to other fuels? Give an estimate of the average cost, say for all of the consumers on your line?

A. $250 to $300.

Q. Apiece?

A. Apiece, yes, sir.

Q. Do you supply any municipal subdivisions, such as poorhouses or poor farms or public buildings in any of these towns and cities, in which your company supplies gas?

A. We do. We supply the court houses and jails and city buildings, public schools, hospitals, hose houses.

Q. All the general public buildings then of the state and municipalities?

A. We do.

Q. Where you are supplying gas to private consumers?

A. That is correct.

Q. Have you been able to meet the demands for gas upon your lines in the last few years?

A. There have been shortages in the cold weather during periods of the last few years.

Q. And how has that become in later years—has it become more acute each year?

A. It has become more acute, and becomes more acute each
975 year.

Q. What was the situation last winter?

A. Last year it would have been almost appalling had it not been for the discovery of this McKeesport gas last fall, which helped us out to a great extent, so that our shortages were not very marked until April; April was our worst month, when the field had played itself out.

Q. What policy has the company adopted, with reference to domestic and industrial consumers?

A. Well, we always shut off industrial consumers at the approach of cold weather, or when the pressures in our lines begin to decline, so that we can take care of the domestic consumers.

Q. Domestic consumers then are always given the preference?

A. Always given the preference.

Q. What did you do as to the making of contracts with industrial consumers, as to what you take on and what you will not take on?

A. Each industrial contract contains a clause that they agree to be shut off at a moment's notice, in order to take care of domestic consumers.

Q. What I was inquiring about—Do you make any investigation as to the character of the use that the industrial consumer—or the purposes for which he wants to use the gas, and as to the
976 purpose for which you sell it to him to use?

A. Oh, yes; we have refused to make contracts for boiler use, for instance, where coal could be readily substituted. We try to confine the use of industrial gas to furnaces and pots and such uses in glass houses, where they cannot very readily substitute other fuels.

Q. And that has been the policy of the company, has it not?

A. That has been the policy of the company; yes, sir.

Q. Do you supply industrial consumers out of anything except the surplus after having supplied the domestic consumers?

A. We do not; the domestic consumer comes first.

Q. What would you say was the maximum variation between the normal and the peak load in the coldest weather?

A. In the ratio of about one to ten.

Q. About a thousand per cent would be the peak load?

A. You are speaking about domestic requirements?

Q. Yes.
A. Yes, sir, about a thousand per cent.
Q. And do you have to meet those peak loads every winter?
A. We do.
Q. You are confronted with those conditions?
A. We are, and at times during the day the ratio is even greater than that.

Q. And why is that?

977 A. Well, people get up in the morning, for instance, and turn on all of the fires to heat up the house and cook breakfast, and the demand is very strong at that time.

Q. Now, as treasurer and bookkeeper of the Hope Natural Gas Company, I presume you are thoroughly familiar with the causes which led up to the acquisition of the Peoples Natural Gas Company, are you not?
A. I am.
Q. Who owns and controls the Peoples Natural Gas Company?
A. The Standard Oil Company of New Jersey.
Q. The same company that owns and controls the Hope?
A. They do.
Q. For what purpose was the Peoples Natural Gas Company acquired, and when was it acquired?

Mr. Hoffheimer: That is objected to, in so far as it relates to the purpose for which the Peoples Gas Company was acquired, as calling for an opinion or a conclusion of the witness, and as incompetent, irrelevant and immaterial.

The Commissioner: Note the objection, and let the witness answer.

978 A. The Peoples Natural Gas Company was purchased by the Standard interests in 1903. At that time the Peoples Natural Gas Company was short of gas, and the Hope Natural Gas Company had a surplus. It was for the purpose of marketing this surplus that the Standard interests bought the Peoples Natural Gas Company.

Q. That is, the Hope Natural Gas Company, you say, at that time had a surplus?
A. Had a surplus.
Q. Of gas?
A. Of gas, and the other company was short.
Q. And was unable to supply its consumers?
A. It was.
Q. At that time did the Peoples Natural Gas Company have a large consumption, a large demand for gas?
A. It was a comparatively small company. It had, I don't remember how many consumers, but perhaps less than one-third of the consumers that the Peoples Company has at the present time. In other words, after the Standard interests purchased the Peoples Natural Gas Company, they expanded and took on other plants—took on other towns, I mean.
Q. But the Peoples Natural Gas Company at that time had its

franchises in the City of Pittsburgh and other sections, and was connected, was it not, with some of the industrial plants in
979 this vicinity?

A. Oh, yes.

Q. And the opportunity therefore to market large quantities of gas?

A. There was.

Q. Now, at that time, did the Hope Natural Gas Company have a large surplus which it was unable to market?

A. They did.

Q. The purchase of the Peoples Plant was to find a market for that surplus?

A. That was the purpose.

Q. As you stated?

A. That was the purpose of the purchase.

Q. Now, then, have the two plants been operated accordingly ever since?

A. They have.

Q. Under the same general direction?

A. They have; yes, sir.

Q. What was done with reference to laying pipe lines to furnish gas to the Peoples Company, by either the Hope or the Peoples Company, or both?

A. Well, immediately after the purchase of the Peoples Company, the Hope Natural Gas Company started to lay a 16-inch line from Hastings station up to Brave, Pennsylvania; and they also laid another 16-inch line from near Wilsonburg, in
980 Harrison County, to Brave, for the purpose of taking gas from that section. At the same time, the Peoples Company started to build a 20-inch line from Pittsburgh to Brave, to get this gas.

Q. How long was that line?

A. About 60 miles.

Q. And what did it cost, in round numbers?

A. I do not know.

Q. How long was the line laid by the Hope Company?

A. I suppose that line would cost $1,800,000, something of that kind, at the time it was built. The line built by the Hope Company I suppose was 100 miles long, the line to Wilsonburg, and the line to Glover probably about 30 miles.

Q. What did this line cost, in round numbers?

A. About a million and a half, that would be my estimate.

Q. Now, what is the relation between the Hope Natural Gas Company and the East Ohio Gas Company?

A. The Hope Natural Gas Company was organized for the purpose of supplying the East Ohio Gas Company with gas, and they are still trying to do that.

Mr. Hoffheimer: I move to strike out the statement of the witness as to the purpose for which the Hope Natural Gas Com-
981 pany was organized, as constituting an opinion or conclusion of the witness, and also as relating to matters which are to

be determined by the charter of the company and the public records.

The Commissioner: Note the motion.

Mr. Weil:

Q. What territory doest he East Ohio Company supply?

A. The East Ohio Gas Company supplies the eastern part of Ohio and as far north as Cleveland, including Cleveland; Cleveland, Akron, Canton, and Youngstown are among their principal cities.

Q. Were not those two rompanies organized and incorporated at substantially the same time?

A. They were.

Q. And were incorporated through the Standard Oil Company of New Jersey?

A. They were incorporated through the National Transit Company, and afterwards assigned to the Standard Oil Company of New Jersey. At that time the Standard Oil Company of New Jersey controlled the National Transit Company.

Q. And the East Ohio Company and the Hope Natural
982 Gas Company were practically arms of the same operation and movement, as I understand it?

A. They were.

Q. What were the facts as to the lines of the Hope Company and the East Ohio Company being constructed—were they constructed at the same time?

A. They were. The line was started in West Virginia and built straight through to Akron, the first line. And that East Ohio Company assumed the Ohio investment and the Hope Natural Gas Company assumed the West Virginia investment.

Q. And what other lines were there?

A. Oh, later—the next line was an 18-inch line, and the next line was another 18-inch line.

Q. Where was the first line built?

A. Well, the first line was built from a point—it started over at Piney, in Wetzel County, West Virginia, and came past what is now Hastings Station, and up through Marshall County, to a point about four miles below Moundsville; and continued from there up near and taking in the lines of Urichsville, Dennison, New Philadelphia, Canal Dover, Massilon, Canton, and Akron, in Ohio And they continued to supply those towns through that 10-inch line until 1902, when the Hope acquired more territory, and an
983 additional line 18 inches in diameter, practically paralleling the 10-inch line, was built and continued through to Cleveland, Ohio. Later on, an 18-inch line was built from Hastings and across the river near Clarington, probably ten or fifteen miles south of the original river crossing, and continued through to Cleveland, and tied in with the other system at different points along the line. Then there was a 20-inch line and I believe another 18-inch line built later on.

Q. These lines that you have described were built in West Virginia by the Hope Company, were they?
A. They were.
Q. And were charged in Ohio to the East Ohio Company?
A. They were. Any lines that the Hope Company built for the East Ohio in Ohio were charged to the Ohio Company.
Q. But those lines, all of them that you have described, were started and built continuously through to the respective points that you have designated?
A. They were.
Q. Substantially as one line?
A. Well, some of the later lines, the 18-inch lines, were started at different points in Ohio, but the construction of the lines in Ohio and West Virginia was simultaneous.

(Pennsylvania Exhibit No. 15 shown witness.)

984 Q. Calling your attention to Pennsylvania Exhibit No. 15, being a map, does this map show the lines of the Peoples Natural Gas Company in Pennsylvania?
A. It shows the main lines of the Peoples Natural Gas Company.
Q. And those lines are all lines indicated in red, are they not?
A. The lines indicated in red and within the state of Pennsylvania are the main lines of the Peoples Natural Gas Company.
Q. Those lines show all of the main transportation lines, but do not show either the gathering lines, the intake lines or the distributing systems of the Peoples Company?
A. That is true.
Q. Now, what is the uttermost distance from Brave Station, for example, to the point in Clarion County beyond Pew Station?
A. From Brave Station to Clarion County, I imagine would be about 125 or 130 miles.
Q. And what would be the distance between the state line at a point near Eldersville in West Virginia, and Altoona?
A. About 120 or 125 miles.

985 Q. What is the total investment of the Peoples Natural Gas Company?—Fix the date say as of the first of January, 1920, or December 31, 1919.
A. The total investment was $16,442,234.71.
Q. As of those dates?
A. As of December 31, 1919.
Q. In what does that investment consist, in a general way?
A. In main lines, field lines, and city plants.
Q. What about the territory, how is that charged?
A. Well, that was carried only at the nominal cost or bonus paid for the acreage, if there was any charged,—a small amount.
Q. In the event of the cessation of the gas supply, so that you had no adequate amount of gas to supply to the consumers and thereby maintain your plant, what would you estimate would be the value of your plant under those conditions?
A. That is a hard question to answer, in regards to the Peoples Natural Gas Company, for the reason that your city plants might

be converted into an artificial plant, or sold for that purpose. I wouldn't know what the recovery value would be in the city plants. As far as your field and main lines are concerned, I would suppose you would be able to realive, oh, perhaps 15 per cent of your investment.

986 Q. Well, as to your city distributing plants, unless they could be sold, as you said, for the purpose of supplying some manufactured gas, what would they be worth? Would the amount that you could get for it as junk pay for taking it up?

A. It would not, not in the city plants. And that is one thing that makes the question as relates to the Peoples Natural Gas Company more difficult to answer; for the reason that we have a large number of small towns that probably it wouldn't pay to put in an artificial gas plant; so that it is a hard question for me to answer.

Q. Well, the question of an artificial gas plant to supply gas for fuel in any of these localities is still one of the questions to be determined by future developments, is it not?

A. It is something that I must confess I know nothing about.

Q. Does anybody else that you know anything about know anything about it?

A. Well, we haven't found anybody that is very wise yet.

Q. Mr. Tonkin, during the coming winter, what percentage of gas do you estimate you will require from the Hope Company, in order to supply your consumers?

A. We should have from the Hope Company, in order to supply our customers, about two-thirds of our consumption.

Q. Have you no other source from which to obtain that supply, except the Hope?

987 A. There is not.

Q. Even with that amount supplied by the Hope, I believe you have already testified there are periods during the peak loads where you are utterly unable to supply your consumers?

A. There have been such shortages for several years past, and no doubt it will be more acute this coming year, this coming winter.

Q. Now, then, what would be the effect upon the operation of your company, if, under the provisions of the Act of the Legislature in controversy here, the Hope Company should be compelled to make connections with other companies to supply their deficit, or should be compelled to supply the demands of the consumers in West Virginia with gas before making deliveries to you? What would be the effect?

Mr. Hoffheimer: That is objected to, on the grounds stated previously, in objections to similar questions to other witnesses.

The Commissioner: Note the objection and let the witness answer.

988 A. Well, the result would probably be that on extremely cold days there would be very little, if any, gas come north through the lines connecting with the Hope Company. It would create a situation that would leave us practically without gas, and what little gas we would have left would be scattered around to so many places, and we would have to try to do so much with so little gas, that we wouldn't have any service. It would also create

a dangerous situation, where the gas would go out, no doubt, in a number of places. In fact, it would demoralize the operation of the company.

Q. Would that demoralization go to the extent of substantially shutting down your operations?

Mr. Hoffheimer: The same objection.

The Commissioner: Note the objection.

A. I think that after one winter of that, our consumers would probably want to leave us; that they wouldn't put up with the inconveniences and the suffering that they would have to go through, under those conditions.

Q. From your practical knowledge and information as to the operation of natural gas lines, and your familiarity with the Hope Company, by reason of your official connection therewith,
989 what do you say as to those demands, such as I have described, being such as to demoralize or interfere with the whole operation of the Hope Company's system.

Mr. Hoffheimer: I object to the form of that question, in respect to its being leading, and as calling for an opinion or conclusion of the witness, and as being speculative in character.

The Commissioner: Note the objection and let the witness answer.

A. Well, I know that during my connection with the Hope Natural Gas Company there were a great many requests of other gas companies and other consumers for a supply of gas, and it is my opinion that the demand on their lines would be so great from companies doing business in West Virginia and from industrial plants there, that there would be no gas left in cold weather to distribute to the Peoples Natural Gas Company.

Q. You stated, in answer to one of the previous questions, that this shortage of gas, occasioned in the manner I have described, would make it dangerous. Will you explain that a little more fully?—dangerous to consumers?

990 A. Well, there is a very great danger when the gas goes out in a house, to the safety of the consumer and the safety of his property; because if he is asleep or happens to be away, or something of that kind—particularly if there is one light that happened not to go out, the gas would come back on and fill the house with gas, and an explosion would be bound to occur. There is always that danger; that is one danger,—of the gas going out and then coming back on again before the valves are shut off.

Q. Well, would the cessation of the supply such as has been described, result in such an intermittent supply of gas as to produce those conditions?

A. There is no doubt about it in my mind.

Q. What do the gas companies do now when, by reason of some breakage in the line, or something else, they are compelled to shut off the gas from any particular section of their lines—what do they do with reference to their consumers, in preparation for that, both before and after?

A. We send out our own employees, and sometimes enlist the services of the Boy Scouts or anybody we can get hold of, to go and notify all the consumers to shut off their valves and not to turn them on until we tell them that the supply is back in the lines; a house-to-house canvass to notify them to shut them off.

991 Q. And then do you notify them subsequently?

A. Subsequently we notify them what time the gas will be turned back into the line and what time they can open up their valves.

Q. Is that the universal custom of all gas companies supplying consumers?

A. I believe so.

Q. You testified, Mr. Tonkin, I believe, that you were the general and confidential bookkeeper for the Hope and the East Ohio, at the time these lines were being laid, and so forth, to which you have testified?

A. Yes, sir, I was the general bookkeeper for both companies. The books were kept at one office, and I was the general bookkeeper for both companies.

Q. At the time that work was being done?

A. At the time that work was being done; yes, sir.

Q. And when it was undertaken?

A. Well, just a few months after, after the organization of the companies. At the time of the organizations in 1898, I was in the purchasing department, purchasing material for them. Two or three months later I went down and took the position of general bookkeeper.

Q. Where was the general office?

992 A. It was at Oil City at that time.

Q. Did you buy the material for these lines?

A. I was a clerk in the Purchasing Department. I was not the purchasing agent, but that department bought the material, yes, sir.

Cross-examination.

Mr. Hoffheimer:

Q. How long has the Peoples Natural Gas Company been in existence?

A. Since 1885.

Q. Where did its field operations start?

A. Out here near Murraysville, about on the Allegheny and Westmoreland County line.

Q. What were the original places which it supplied with gas?

A. Pittsburgh, New Kensington, Milltown, and they leased the plant of the Manufacturers Gas Company of Greensburg, and supplied gas to Greensburg through that leased plant. I believe that was about the extent of their territory.

Q. Greensburg is in Westmoreland County, is it not?

A. Westmoreland County, yes, sir.

Q. Then, as I understand you, from 1885 until 1903, the con-

sumption of the Peoples Natural Gas Company increased to a point substantially one-third of the present consumption; is that
993 right?

A. No, I think three times. It increased three times, at least three times. Is that what you mean?

Q. What I had in mind was this: that between 1885, when the Peoples Company began business, until 1903, when the supply from the Hope Company was contracted for or first obtained, the Peoples Natural Gas's consumption had gotten to a point where it was about one-third of the consumption today?

A. I believe so.

Q. Then the other two-thirds by which the present day consumption exceeds that, is accounted for by later extension of the lines and territory of service?

A. I think when I answered that question that I explained I was not familiar with the affairs of the Peoples Gas Company at the time that it was taken over, but it was my opinion that their consumption was not over one-third——

Q. The point is that from that time, when the Peoples was taken over by the Standard interests, to the present time, the increase in consumption has been due to expansion of territory supplied and the increase of numbers of consumers of the Peoples Natural Gas Company?

A. Yes, sir.

Q. When did the shortage in the gas supply of the Peoples
994 Natural Gas Company first manifest itself?

A. Well, they were short at the time they were taken over by the Standard interests.

Q. That was in 1903?

A. Yes, in 1903.

Q. Do you know how far back of 1903 that shortage had become evident?

A. I know nothing about the company back there.

Q. But you do know that it had become acute?

A. That is my understanding; as the reasons given for the former owners wishing to dispose of the property. They either had to dispose of the property or put in enough money to go to West Virginia for their supply—or felt that they did. That was the understanding that I had.

Q. You have given us figures as to the number of wells of the Peoples Company, as of February, 1920?

A. Yes, sir.

Q. Also, from 1916 to 1919, inclusive, the gas production and purchases of the Peoples Company?

A. I have.

Q. Also, as of 1919, the acreage developed and undeveloped of the Peoples Company?

A. Yes, sir.

Q. For the sake of uniformity, and in order to cover the
995 same period of time that we have been inquiring into in regard to other companies, we would like to have, if you do

not have it now available, later, when you get the time to get the material together,—the number of wells, year by year, from 1910 to 1919, inclusive; the number of consumers, domestic, industrial and miscellaneous, or however else you may classify them, year by year, during the same period; the gas consumption year by year, during the same period, of these various classes; the gas purchases and the Peoples Company's own production, year by year, during the same period?

A. We were furnished that.

Q. And also, if I have not already asked for it, the acreage, developed and undeveloped, year by year, during this same period?

A. Yes, sir.

Q. Are you familiar with the circumstances under which that delivery and measuring station at Brave was established?

A. Yes, sir.

Q. That was put in in 1903?

A. No, in 1903, we measured the gas at a point a couple of miles south of the Pennsylvania State line, called Bulah station. We had a Pitot tube station there, where the gas was measured. I think it was about probably 1910, before that station was changed—

996 or after that; 1912, perhaps—that the station was changed and put up at Brave, where we did away with the operators of the Bulah station, and the men at Brave Station looked after the measurement of that gas.

Q. That Bulah station, as you call it, was located where?

A. In West Virginia.

Q. What county?

A. Monongalia County.

Q. What was the occasion for the transfer of the delivery and measuring station, from Bulah to Brave?

A. Well, at Bulah we had two men on duty twelve hours apiece, and we figured on doing away with that expense, and removed it to Brave when the style of the meter was changed to a recording gauge, where the gauges only had to be changed once a day; so that it did away with the services practically of two men.

Q. What had there been at Brave up to 1910?

A. There was a compressing station built by the Peoples Natural Gas Company there.

Q. And this delivery and measuring station was practically consolidated with the compressing station?

A. Yes, sir.

Q. How far is Brave from the boundary between Pennsylvania and West Virginia?

A. 400 yards; perhaps less.

997 Q. When was that station at Eldersville established?

A. About 1908, as near as I can figure it.

Q. Was that the time when deliveries from the Hope to the Peoples began in that vicinity?

A. I believe it was.

Q. How far is Eldersville from the line between Pennsylvania and West Virginia?

A. Well, I don't know that; I have never been at Eldersville. About two miles, it looks on the map.

Q. Am I correct in understanding that deliveries at that point have not taken place for several years past?

Q. The Hope Company is supplying some towns in Brooke County, and we took any gas that they had to spare; but recently I believe their own consumption at that point takes all the gas, and while the meter is still set there, I don't believe we have taken any gas there recently.

Q. How long would you say it had been since you got any gas from the Hope at that point?

A. I think a year and a half or so.

Q. When did deliveries commence at Glover Station?

A. As soon as the pipe line was completed up to Brave, in the latter part of 1903, or perhaps early in 1904.

Q. There is a delivery measuring station there?

A. There is a measuring station at Glover.

998 Q. How far is it from the Pennsylvania line to the Glover Station?

A. About five miles.

Q. Aside from the development in the McKeesport field, would you say that efforts to obtain additional gas in Pennsylvania within the last few years have been successful, or to the contrary?

A. They have not been successful. The fields in Pennsylvania are what you might call old fields, and highly competitive, and the fields have been pretty well developed.

Q. How far back did that development begin, to your knowledge or information?

A. Oh, these fields are all old, many years old, but occasionally you strike a rich pool in them at some time or other; but the fields are twenty-five years old mostly.

Q. More than that, if they date back to the beginning of the——

A. Some of them; yes, sir. The Murraysville field is much older than that—thirty-five years old or more.

Q. The efforts of the Peoples Company to obtain additional gas in Pennsylvania have been confined to drilling wells of ordinary character and the purchase of gas from other producers?

A. Not entirely. We have done some wildcatting in the hopes that we might develop additional gas, and we have done some

999 deep drilling, some very expensive deep drilling, in the hopes that we might obtain additional gas at lower depths.

Q. How many deep wells have you drilled?

A. Well, we drilled one near McDonald that was 7,200 feet, something like that. We drilled one out near Ligonier, in Westmoreland County, to a depth of 6,822 feet, and developed a small amount of gas.

Q. The fact about it is, though, that a small amount of gas obtained in one of those deep wells gives you a better supply than an equal amount of gas obtained in one of the shallow wells, because of the greater rock pressure, does it not?

A. That is true, yes. However, we haven't had very much ex-

perience; this is the first time we have ever got deep gas, and the well is only a few months old, and in bad shape at the present time, on account of a string of tools in the hole, and a bad lot of tubing, defective tubing, dropped into the hole; so the well is far from a clear hole and is in bad shape.

Q. In other words, you have a fishing job on your hands?

A. We have.

Q. Such as is pretty well known in the gas business?

A. Yes, sir; and we have a man-size job to get it out.

1000 Q. You would say that the matter of deep well drilling is still in its inception?

A. No. The sands that all these deep wells have tried to reach—or at least this is my understanding—that they have tried to reach the Clinton sand. The Clinton sand, it isn't possible to reach it in but very few places in this section of the country, on account of the great depths, so that there would be very few places that you can go and try to reach that sand; and we don't know that there is anything in this sand when we do reach it—if we are successful and ever reach it.

Q. And you don't know that there are not other sands below the usual sands that are encountered, by the test of deep drilling, which may produce gas?

A. We have drilled through all the other sands, all the other known sands.

Q. From your very broad knowledge and experience in the gas business, I suppose that you are pretty well acquainted with the uses and adaptation of buildings and appliances in West Virginia, with relation to the gas supply, are you not?

A. I probably know something about it.

Q. The fact is that so far as the construction of houses is concerned, the particular appliances installed, and the general method of domestic consumption of gas is concerned, they are and

1001 have been substantially the same in Pennsylvania and West Virginia. Is that the fact?

A. I presume that is true; yes, sir.

Q. And when you speak of the necessity of reconstruction of houses or change in appliances in Pennsylvania, as a result of the cutting off of gas supply in Pennsylvania, it is your view that the same incidents would apply to the cutting off of the gas supply in West Virginia?

A. It would, if the West Virginia consumers should find it necessary to go over to coal for their heating appliances, and for their grates, yes, sir.

Q. In other words, if the West Virginia consumer did not get enough gas for his domestic uses, he would have to do the very same things, incur the very same expenses and encounter the very same inconveniences which you attribute to the Pennsylvania consumer under similar circumstances?

A. There is no doubt about that.

Q. And I suppose that you think it true that in case of an inadequate gas supply to domestic consumers in West Virginia, and

the sudden cutting off of gas during peak load periods, or during cold weather, you would have the same inconveniences and the same dangers to life and property in West Virginia that you de-
1002 scribe in Pennsylvania?

A. The conditions are the same in one state as another, in case of a shortage.

Q. In other words, it is just as easy to asphyxiate a West Virginian, in case the gas would suddenly be cut off, and then turned on again without warning, as it would be a hardy Pennsylvanian?

A. I expect that is true.

Q. In regard to this map which has been referred to in your evidence, showing the Hope and Reserve and Peoples Natural Gas Companies' lines: that may does not show the gathering or the field or the distributing lines or plants of any one of those three companies, does it?

A. It does not.

Q. You say that you formerly made contracts for the supply of industrial gas for pipe lines, furnaces, glasshouses, and that sort of thing?

A. Yes, sir.

Q. Do you still make contracts for those purposes?

A. We still make contracts for gas for industrial purposes, but we are discouraging as much as possible the use of it where other fuels can be substituted. For instance, in boiler use,—We do furnish boilers for drilling wells, and things of that kind, but we have eliminated the boiler consumption in office buildings
1003 down town here, for instance, and in apartment houses and in the mills, and try to confine it to the use that the gas is best adapted for, such as furnaces and pots.

Q. In other words, while still continuing to furnish industrial gas, you endeavor to classify, to a certain extent, the industrial consumption itself, by regarding some of it as more essential than the rest?

A. We do.

Q. What is the nature of the industries to which you furnish industrial gas?

A. Steel mills, glass plants.

Q. Where are they located?

A. Around in the Pittsburgh district largely.

Q. In the steel mills, what is their gas used for in a general way? I do not want, however, to get you into technical steel making.

A. Why, in open-hearth furnaces very largely.

Q. And in the glass plants?

A. Well, I am not familiar with those plants. It is in what they call the "glory holes" that they seem to require the gas for glass manufacture, and it is hard to get along without some kind of gas for that purpose, I believe.

Q. For the purpose of heating the tanks of molten glass?

A. Yes, sir.

1004 Q. You are today supplying gas for those purposes?

A. We are.

Q. Has there ever been a time when the Peoples Company has not supplied industrial gas?

A. The year before last we got the glass factories all to shut down for the winter, except those, I believe, that were making glass for munition plants, or for war purposes rather; because you can't shut a gas plant entirely down without ruining their pots; so that we anticipated that there would be periods when we would have to shut down entirely, and we discouraged them from going on, and in fact notified them that we would not furnish them gas at that period. And last year, on account of this McKeesport field, we allowed them to run, because they could shut down to a point where we could take care of our domestic consumers.

Q. Would you regard the McKeesport production as an abnormal production?

A. Absolutely.

Q. And not as a permanent thing?

A. No, it is nearly gone now.

Q. How about steel plants? Have they been getting their industrial gas out of your line?

A. They have been connected, but a steel plant is one
1005 that can very readily change over to other fuel, and when we call them on the telephone and tell them to get off, with their open-hearth furnaces, or something else, they immediately comply, without any question.

Q. The fact is that under their contracts with you, as you recall them, the priority of service is given to the domestic consumer?

A. It is, at all times.

Q. It is a similar condition of priority to that which is given to domestic consumers over industrial in West Virginia and elsewhere, as far as you know, is it not?

A. Well, I don't think they have enforced it as much in West Virginia as they have in Pennsylvania; I am sure they haven't.

Q. I am not talking about enforcement; I am talking about the nature of the contracts or arrangements?

A. The contracts are the same, yes, sir.

Q. They are the same?

A. Yes sir.

Here a recess was taken until 1:30 o'clock P. M.

1006 Friday Afternoon, July 2, 1920.

And now, the hour of 1:30 o'clock, P. M., having arrived, hearing resumed.

JOHN B. TONKIN resumes the stand.

Cross-examination (continued).

Mr. Hoffheimer:

Q. If it is the fact that you have had difficulty in obtaining sufficient gas to take care of your domestic consumers, under the conditions, how does it come about that you have been and are supplying gas to manufacturers and industrial concerns?

A. Our fields are very competitive; where we have fields that are not competitive, during the summer time we shut in those wells to hold them for the benefit of domestic consumers in the winter time. It is only from competitive fields that gas is sold and used for manufacturing purposes, and if we didn't do it, the gas would go out of the field through the other companies' wells and reach the manufacturer; so it is on account of competition, conditions have forced us to sell gas to industrial consumers, as well as helping to keep down the price of the gas to the domestic con-
1007 sumer.

Q. How does the industrial gas business keep down the price to the domestic consumers?

A. If we were to depend entirely upon the domestic consumer for our revenues, and he doesn't use hardly any in the summer time, we wouldn't have money enough for operating; it would be necessary to charge him several times the price that he is being charged now, the price for that service.

Q. So that it comes about that the domestic consumer and the gas company each have obtained a benefit through the supplying of gas to industrial concerns?

A. That is true.

Q. The fact is that all of the gas companies in Pennsylvania and West Virginia, so far as you know, continue to supply gas to industrial consumers?

A. I believe that all of the gas companies in this part of Pennsylvania do that. The gas companies in the northern end of the state, northwestern Pennsylvania, I understand they shut off all their industrial gas? Here we even go farther than that; we not only shut in our own wells that are not competitive, but we get the other companies in certain fields to agree to cut down their compressing stations in a certain section, and shut off their wells in that section during the summer, and we shut down ours, so that certain fields are only used in the winter time. There are
1008 fields where manufacturing concerns have their own individual wells, or some gas company has wells that are used

almost exclusively for industrial purposes; in those fields we don't shut our wells in, because the other fellow would take the gas out from under the territory.

Q. And in that territory where you shut down your wells, what do you find to be the effect on the wells after you re-open them in the winter?

A. Well, it helps to build up the well a little bit. They accumulate a little more of their rock pressure—that is, it keeps them fresh, so that when they are turned on in the winter time they produce a little bit more than if they were in an exhaustive condition from being used the year around. It helps very considerably.

Q. Do you get more production out of the well than if you had used it continually?

A. You get more nearly the maximum production, yes.

Q. You gave us some percentage of the decline in the Peoples Gas Company's gas supply in Pennsylvania, giving us as the approximate decline from 1918 to 1919, 11 per cent, and an estimate of a prospective decline of 15 per cent. You were speaking of the experience of the Peoples Natural Gas Company. Has the experience of the Peoples Natural Gas Company been different from that of other gas companies?

1009 A. I believe it has been a little bit different from the West Virginia gas.

Q. Different?

A. I think there has been a little difference.

Q. That is, in the rate of the percentage of decline?

A. Yes, sir.

Q. But in Pennsylvania there has been substantially the same rate of decline, so far as you know?

A. No; I think Pennsylvania's decline has possibly been a little bit less in recent years—less percentage.

Q. Less than West Virginia?

A. Well, I am not sure about that.

Q. Whether the figures are the same or not, there has been a relative decline in both Pennsylvania and West Virginia?

A. There has.

Q. And in fact that has been the history of the gas business everywhere, so far as you know?

A. Our decline in Pennsylvania has possibly been less, for the reason that we have held back more wells when we could get gas, and it has only been the last few years that we have worked our fields to what you might call the maximum.

Q. Well, are you now working the Pennsylvania fields to

1010 the maximum?

A. Except in those cases where we can shut in the gas, in non-competitive fields.

Q. The question I asked you was this: The experience in Pennsylvania and West Virginia as to the fact of decline, leaving out the particular percentage, has been the experience in all of the gas fields which have been developed for some time, so far as you know?

A. So far as I know, it has, but I didn't follow that part of it

very closely when I was connected with the West Virginia Company—as closely as I have since I have taken a different position in the Peoples Company. I was in the accounting end of it there and didn't watch the operations so closely.

Q. In what particular territories or fields do you have arrangements by which you are able to shut in wells in the summer time, as you have indicated?

A. Well, in part of the Armstrong County field——

Q. That is, Pennsylvania?

A. Pennsylvania. Out here at Murrysville—In the Murrysville, I believe that is shut down now by agreement with the Philadelphia Company and the American Gas Company, that they will not use their wells there if we do not, and in certain sections of Clar-
1011 ion County our wells are pretty well connected, we have them shut down.

Q. What are the companies in Clarion and Armstrong Counties that are concerned?

A. Well, I refer to the American, in Armstrong County. In Clarion County we have arrangement with anybody this year to shut off any gas, but there are certain sections of the field that are pretty well protected, where we have just our own wells, and we shut those down.

Q. You have pointed out to us the places of delivery and measurement of gas from the Hope Natural Gas Company. Into what lines in Pennsylvania does the Hope Natural Gas Company's gas go for transmission and distribution?

A. It goes into our main transmission lines, which are 12- and 12-inch, paralleling one another from Brave up to Wilkinsburg, just outside of the City of Pittsburgh, with branch lines to the west towards Imperial, Burgettstown and the town of Woodlawn and towns in that neighborhood, with a branch off to the east, going as far east as Altoona and Juniata.

Q. Some of that gas from the Hope Natural Gas Company comes into Pittsburgh and is distributed there for local consumption?

A. It does.

Q. And so at Altoona?

A. Yes, sir; it does.

1012 Q. And at Greensburg?

A. Yes, sir.

Q. If that is true, what becomes of your Pennsylvania produced gas?

A. That is pumped into the same line and commingled.

Q. And gets to the same places, so far as you know, as the Hope Company gas?

A. And gets to the same places; yes, sir.

Q. Speaking of the decline of the McKeesport field, has there been any other field discovered in the last year or two in Pennsylvania, which duplicates that condition of gas production, so as to give you a considerable additional supply?

A. No, there has been nothing like it since the beginning of the gas industry. The nearest approach to it probably was the field dis-

covered up in Ohio near Cleveland, which was over-drilled and played out very shortly.

Mr. Weil:

Q. What year?
A. I would say about 1914.

Mr. Hoffheimer:

Q. Anyway, you wouldn't know where to go and find another field like the McKeesport field?
1013 A. We would not.
Q. Did I correctly understand you as saying that if it had not been for the gas from the McKeesport field, you would have had an appalling condition of gas shortage in the last winter?
A. No question about it in my mind.
Q. You would have had an appalling shortage?
A. We would have had appalling conditions.
Q. Then you have a prospect of an appalling condition next winter?
A. We are trying to forcibly impress upon our consumers the absolute necessity of putting their main heating appliance over to coal, with a view of trying to get steady service. If our consumers will do that, we feel we will be able to take good care of them. If they don't do that, and continue to use gas as they have in the *the* past, without curtailing their present supply, there will certainly be an appalling condition in the gas situation here.
Q. What kind of appliances for the burning of coal have you in mind?
A. Putting their furnace, their main heating furnace; in case they haven't got that, turn their grates or whatever their main heating appliances are in the home, over into coal or coke.
1014 Q. And if they haven't a furnace, to instal one?
A. Yes, sir.
Q. How much would that average furnace cost for one of these Pennsylvania houses?
A. Why, I installed one in a house a year or so ago, a coal furnace, for about $135—$150.
Q. Did that involve any reconstruction of your house?
A. No, it did not.
Q. Did you continue to use natural gas?
A. Last winter I used both gas and coal.
Q. How about your lighting?
A. Electric light.
Q. Electric lighting is pretty common here in Pennsylvania, isn't it?
A. It is, in the larger cities, yes, sir.
Q. You mean by "larger cities," Pittsburgh, Greensburg, Altoona, and places of that character?
A. Places of that kind; yes, sir.
Q. Places running down to 5,000 and 10,000 inhabitants?

A. I expect that it would.
Q. Almost all of them have electric lights?
A. I think so.
Q. And almost all of the houses use electric light?
A. I couldn't say what proportion of them use electric
1015 lights.
Q. A very large number?
A. I suppose the majority of them.
Q. What was the general state of the weather last winter?
A. Quite a cold winter.
Q. Very cold?
A. It was a steady cold—not any days here—not over one or two days—that reached below zero in Pittsburgh, I believe; but it was a steady cold.
Q. Would you say the temperature—or rather the average temperature—the last winter here in Pittsburgh was less or greater than preceding winters?
A. It was a lower temperature than the year before. I don't know how it compared with 1917-18, that was a very cold winter.
Q. As a matter of fact now, do you not recall that the temperature last winter, on the average, was milder than it had been in several preceding years?
A. I think you are mistaken. I think the temperature last winter was colder than it had been in the preceding year. I have just checked up March, April and May for another purpose, and find that those three months were lower than the year before.
Q. And would that statement apply to conditions throughout that part of Pennsylvania served by the Peoples Gas Company?
1016 A. I think so.
Q. Both in the months indicated and throughout the winter?
A. I think throughout the winter.
Q. As you understand it, there is a continual decline in gas production in West Virginia?
A. There is, yes, sir.
Q. As you understand it, that is true of the Hope Natural Gas Company, upon whose gas your company is dependent to a large extent?
A. That is true of the conditions existing in the Hope Natural Gas Company, yes, sir.
Q. The one way you think of for counteracting the effects of that shortage is to induce your consumers to exercise economy in the consumption of gas, and to instal other appliances?
A. That is the only thing we can do at the present time.
Q. Even if they do that, you are going to have a day when you haven't enough gas to take care of all your domestic consumers, are you not?
A. They will have to keep on curtailing from time to time.
Q. Do you say they will have to keep on curtailing?
A. Our consumers, I refer to.

Q. Or do you mean, that the Peoples Natural Gas Company will have to curtail?

1017 A. Well, we don't have the gas, so we will necessarily have to curtail.

Q. How will you curtail?

A. By forcing our consumers to use less gas. In other words, they can take off their main heating appliances now, and later on take off some of their grates and eventually use it as artificial gas, as being used in other communities.

Q. That is, confine themselves to other fuels for heating purposes?

A. Yes, sir.

Q. That would leave them using natural gas for what purposes?

A. Well, for the cooking range, for the hot water heating, and incidental heating—such as bathroom heating, and for lighting for those that use gas for lighting.

Q. The only other remedy would be for the Peoples Natural Gas Company to cut off some of its consumers or to get an additional supply?

A. That is the only alternative.

Q. And if you don't get any additional supply of gas, the time is coming when the Peoples Natural Gas Company must do that; is that correct?

A. I don't know that I can say what the Peoples Natural Gas Company will do when it comes to that.

1018 Q. You don't know what it can or would do?

A. I don't know. That is a big problem and should be decided by a good many heads, I guess, if that point comes.

Q. In other words, you anticipate that the condition will arise, but the solution of the problem has not been found?

A. It has not been solved.

Q. But one solution would be to shorten up your territory?

A. That would leave more for the territory that was left, certainly, but it would not be a very profitable arrangement to abandon part of your plant.

Q. Well, is there any irreducible minimum beyond which a domestic consumer won't go, so far as his gas supply is concerned?

A. Well, it is pretty hard to educate consumers who for a great many years have had all the gas they wanted, to come down to burning gas on practically an artificial basis.

Q. Well, supposing a consumer has only enough gas to give him a constant supply at all times for cooking and hot water heating, as indicated, what do you anticipate would be the result?

A. Well, that is probably eventually what he will have to come to.

1019 Q. I say, what will be the result, so far as your gas business is concerned, with that particular class of consumers?

A. Well, by that time our available supply will be down, so that that is all he can get.

Q. And he either will have to submit or quit and go to other fuels?

A. Yes, sir.
Q. What will you do with your gas plant then?
A. Well, I don't know. That is something to be decided in the future. The chances are that you will then have your price up to such a degree that in a large plant such as Pittsburgh you will be enabled to manufacture gas, and mix the gases, and we will eventually get to an artificial plant. That is my own opinion.
Q. That artificial gas proposition is the proposition concerning which you said a little earlier in your examination that nobody was very wise at the present time?
A. It is largely in the experimental stage at the present time.
Q. I believe you anticipate that even if you leave out of view the West Virginia statute which has been mentioned in this litigation, or even if the Court in this case should determine that that
1020 statute is not enforcible, it will still result, will it not, that the contraction of service and the limitation of gas service to cookstoves, for hot water heating appliances, and that sort of thing, will be arrived at?
A. If I understand the question correctly, eventually that will come, but in the meantime you will have to educate your consumers to adapt themselves to these conditions.
Q. But the condition will arrive, even if we don't have this West Virginia law?
A. I expect that some day that condition will arrive.
Q. You gave us some figures of the capital investment of the Peoples Natural Gas Company. Was that the investment in all of its properties?
A. It was.
Q. That includes field pipe lines, local distributing plants, and everything?
A. It does.
Q. Does it include oil wells?
A. It includes the oil investment, yes, sir.
Q. Does it include gasoline plants?
A. Yes, sir.
Q. Do you have a good many gasoline plants?
A. Well, we have $434,000 invested in gasoline plants.
Q. How much in oil wells?
1021 A. $153,000.
Q. The figure you gave us was something over $16,000,000.
A. Sixteen million four hundred forty-two thousand and some odd dollars.
Q. How long has that capital investment been stationary?
A. It never has been stationary; it is increasing all the time.
Q. How has it increased?
A. By building additional pipe lines, drilling additional wells, building additional compressing stations, adding additions to compressing stations already built.
Q. Well, has any depreciation or depletion been charged off against that capital at any time?
A. Yes, sir.
Q. Can you give us a general idea of how that has been done?

A. There has been $4,681,297.71 depreciation charged off.

Q. In what period of time?

A. Since the beginning of business.

Q. Has there been anything charged off for depletion of gas supply?

A. The treasury department allowed us as of March 1st, I think, 1918, to value natural gas deposits, and to charge a depletion
1022 off that. The properties—the natural gas deposits—were valued at that time—No, it was March 1, 1913, and the depletion was arrived at, based on the percentage of decline in rock pressure year by year, from that time on.

Q. Well, without taking you all over that, you did proceed according to the usual method prescribed by the Internal Revenue Department?

A. Yes, sir, we did.

Q. And that accounts for that four million and odd dollars?

A. No, that was no part of the four million dollars, nor is the value of gas deposits any part of the $16,000,000.

Q. What was the amount of depletion that you took—that is, in your gas territory?

A. The valuation was placed at $9,659,657, as of March 1, 1913; the balance, December 31, 1919, is $7,775,494.08.

Q. And the difference between the two sums would be the depletion?

A. There were two years during that period when our rock pressure showed an appreciation, and we appreciated the property accordingly. That may sound strange, but, for instance, we drill a well. Take, for instance, the well we drilled out near Ligonier. That would probably bring our average rock pressure very high for 1919, because the rock pressure of that one well was some-
1023 thing like perhaps—We don't know what it is, but perhaps 3,000 pounds, but it just happened we struck wells that gave us a higher average than before, so we appreciated them in depreciating them. It all depended on the rock pressure.

Q. That Ligonier well was one of the deep wells we spoke of this morning?

A. It was.

Q. You found some gas there?

A. Yes, we found some gas there.

Q. A considerable amount?

A. About four hundred thousand.

Q. How much rock pressure?

A. It is impossible to shut it in to ascertain, the casing wouldn't hold it.

Q. Are you taking gas from that well?

A. We are at times, when we are not fishing.

Q. How much of your capital investment does not cover gas territory or gas deposits? My understanding of your statement was that some amounts, such as bonus payments for leases, and that sort of thing, were included?

A. We had an operated acreage of $374,382.22; we had an unoperated acreage, $167,966.53, or a total of a little over $500,000.

Q. That is included in the sixteen million and odd dollars?
1024 A. That is included.
Q. And represents bonuses and payments upon acquisition of leases?
A. It does.
Q. As distinguished from rentals?
A. It does.
Q. I assume rentals are taken out of your operating revenue?
A. Rentals are operating expenses; yes, sir.
Q. Charged as operating expense?
A. They are, as well as the drilling of wells.
Q. How?
A. Also the drilling of wells.
Q. That goes into your operating expenses?
A. Yes, sir.
Q. Is that the common practice of gas companies?
A. It is; always has been.
Q. You have to take that into consideration when you make your rates, I suppose?
A. Well, you can understand why that is charged to expense, when I tell you that we are adding to our investment each year, without even maintaining the production—for instance, during the year 1919, we added $1,093,513.40 to our investment, and did not maintain our production. In spite of that, our production was off
1025 eleven or twelve per cent.
Q. Where did that money come from—operating income?
A. From the income, yes.
Q. I understood you to express the opinion that the enforcement of this West Virginia statute, about which we are litigating, would result in your receiving little or no gas from the Hope Natural Gas Company. Was that the impression you intended to convey?
A. No, I told you that that would be true on extremely cold days; that that was my opinion of what would happen on extremely cold days.
Q. But with that exception, you would expect to get enough gas to carry you through?
A. I would expect to get some gas from them on other days; they would probably have gas to deliver on warmer days, but that would be very poor service, to take the gas away from our consumers on the very periods when they want it the worst.
Q. What do you mean by "warmer days"—summer time or comparatively mild days in winter?
A. Summer time and mild days in the winter.
Q. You would expect to get some gas from the Hope?
A. I would expect to then.
Q. That probably would be then during your peak load periods?
A. Yes, but that would extend pretty much over all the
1026 cold spell.
Q. In forming that conclusion, that you would get little or no gas during the very cold weather, what did you take into consideration as being the operation or effect of that West Virginia statute?

A. I took into consideration my knowledge of some of the demands, or requests, for service, that have been made of the Hope Natural Gas Company by West Virginia Companies and industrial concerns that are not now supplied by the company.

Q. You had in mind the prospect that the consumers in West Virginia,—domestic and industrial, along the lines of the Hope Natural Gas Company, would receive all of the gas that they desired, before any gas was allowed to go out of the state and into Pennsylvania, had you?

A. I had.

Q. That was the condition you had in mind?

A. That was the condition.

Q. Suppose you eliminate industrial consumption from that assumption of yours; then what in your opinion would be the effect?

A. The effect, in my opinion, would be largely the same; that is, there would be enough gas taken out for domestic consumers
1027 to very seriously cripple the service on the cold days to our consumers up here, and would probably cause such an acute shortage that the conditions that I described would still exist. In other words, the supply of gas gets down so low now at times that it would not take so very much to be taken out of the lines on these extremely cold days, to cause that condition.

Q. How much addition to the West Virginia domestic consumption along the lines of the Hope Natural Gas Company would create the condition in Pennsylvania to which you last referred, Mr. Tonkin?

A. Well, I think if we supplied the companies at Clarksburg, Fairmont and Morgantown, that it would be sufficient to cause that condition.

Q. You mean by the company at Clarksburg, the Clarksburg Light & Heat Company?

A. I mean the Clarksburg Light & Heat Company, yes, sir.

Q. And the company at Fairmont, the Monongahela Valley Traction Company?

A. Yes; I guess it would be the Fairmont Gas Company,—the Monongahela Valley Traction Company.

Q. And at Morgantown, the Randall Gas Company?

A. The Randall Gas Company and the other one; there
1028 are two companies at Morgantown.

Q. But I am trying to get at this: What amount of gas would be added to the domestic consumption of the Hope Natural Gas Company in West Virginia, under the operation of this statute, which amount, as you say, would occasion the condition of shortage in very cold weather in Pennsylvania?

A. I don't know how anybody could arrive at the amount that would be diverted to West Virginia under that statute, because the statute calls not only for the domestic but also for the industrial consumers of West Virginia, and I have no idea what those industrials and domestic would take.

Q. In other words, you don't know how anybody could, at this time, determine how much gas would be taken by or for either class

of consumption in West Virginia, under the operation of this statute?

A. No, I do not. But I know that it wouldn't take so very much—or that it wouldn't take very much to make us critically short here.

Q. But how much would that amount be, in order to get you over the line?

A. Well, if you would take ten or fifteen million off us on a cold day in the winter time, we would have that condition.

1029 Q. Ten or fifteen million cubic feet a day?

A. Would put us in very bad shape.

Q. Well, the real fact is that any increase of the Hope Natural Gas Company's consumption in West Virginia, whether for domestic purposes or for industrial, or any other, would reflect itself in a diminution of the amount of gas which the Peoples Natural Gas Company would receive from the Hope, would it not?

A. I think the Hope Natural Gas Company has its hands full now, without taking on any additional consumption, and that every foot of gas that they would take on for consumers not already their own, would reflect on the amount they would be able to deliver us here.

Q. In other words, any increase in the Hope Natural Gas Company's consumption in West Virginia would lessen the supply to the Peoples Natural Gas Company?

A. Well, they could take on some additional consumers and force the restriction on manufacturers a little bit more, and it would not affect the consumers of the Peoples Natural Gas Company.

Q. That does not quite answer the question. The question was this: Would any increase in the Hope Natural Gas Company's consumption in West Virginia lessen the amount of gas which

1030 the Peoples Natural Gas Company would receive from the Hope Natural Gas Company?

A. It would.

Redirect examination.

Mr. Weil:

Q. Mr. Tonkin, I want to clear up a little your testimony with reference to your sixteen million dollar investment. You say this does not include the value of the gas deposits?

A. It does not.

Q. Except to the extent of about $500,000, the amount that was actually invested in bonuses, and so forth, for procuring the same?

A. That is true.

Q. Have you placed a valuation upon these deposits for the purpose of complying with the Federal revenue laws in charging off depletion, and so forth, against the same?

A. We have.

Q. But that does not enter into the investment account at all?

A. That is no part of the $16,000,000.

Q. Now, the conservation program to which you testified, I wish you would clear that up a little bit further. You spoke of
1031 having your consumers supply other fuel for their heating appliances. You mean by that the heating appliances as distinguished from the incidental heating, from the cookstove, for example?

A. I think I stated, Mr. Weil, that we were asking them to put the main heating appliance in their houses over onto coal; I did not refer to cooking ranges or incidental heating or hot water heating.

Q. Now, that program, as I understand you, is to limit the gas, so far as possible, by arrangement with the consumers, to their cooking stoves, and to what are commonly called instantaneous water heaters.

A. We haven't gone so far as to limit our consumers to anything.

Q. I understand that. I say, that is the propaganda and program which you are now initiating?

A. We are trying to edu[illegible] them to the necessity of putting their main heating applianc[illegible]over, in order that everybody can obtain satisfactory service. If they all keep their main heating appliance on, conditions will be such that there will be very bad service here next winter.

Q. And if the program which you have in mind, and about which you have started your propaganda, with a view to
1032 educating your consumers, is carried out, then the natural gas will be used for the cooking stoves and for the instantaneous water heaters, and where they use it for lighting purposes?

A. That is what we are trying to bring about; yes, sir.

Q. As to whether or not at the present time, under the laws of the states or state in which you are doing business, you would have the power to prescribe definitely or specifically the purposes for which a domestic consumer could use the gas, you are not at present advised, are you?

A. I don't understand that there is any law that would permit us to limit them. I understand that the Public Service Commissions are talking about issuing an order to that effect. I know nothing about the law on it. But I don't think there has been any such order issued so far.

Q. Is there not a difference of opinion between the lawyers representing the respective gas companies, and even those representing the Public Service Commissions, as to whether or not some legislation will be required to give that power, even to the Public Service Commission?

1033 Mr. Hoffheimer: We object to that as irrelevant and immaterial; also as speculative.

The Commissioner: Note the objection.

A. Yes, I have heard that discussion a number of times.

Mr. Weil:

Q. It is a fact, is it not, that those consumers attached to the lines of the company nearest to the point of production obtain better service than those a longer distance from the point of production?

A. That is true; the extreme ends of our lines are always where the shortages are most acute.

Q. And that is true correspondingly or relatively from the point of production?

A. It is. The man nearest the source of production gets the first pull on the line, and his service is apt to be more satisfactory.

Q. There was put in evidence, when the testimony of Mr. Sullivan was being taken, a contract between the Hope Company and the Peoples Company. Prior to the date of that contract, which I believe was in 1911, did you have a parole contract or arrangement, by which the Peoples Company obtained their gas from the Hope Company?

1034 A. It was a verbal arrangement, I believe, prior to that time.

Q. During the time that the Peoples Natural Gas Company has been under its present ownership and control, what has been the amount of dividends declared, in percentages, each year, on its capital?

Mr. Hoffheimer: That is objected to as irrelevant and immaterial.

The Commissioner: Note the objection.

A. I couldn't answer that question without looking it up.

Mr. Weil:

Q. Could you tell us what has been the largest dividend during that whole period?

A. I think the largest dividend was 15 per cent.

Q. And what has been the smallest dividend?

A. I believe the years that no dividend was declared,—a number of them.

Q. A number of years that no dividend was declared. And how has the dividend ranged when a dividend was declared?

A. Why, when we had the money we declared a dividend, and when we didn't have the money we did not.

1035 Q. Well, the dividends have ranged from no dividend at all and three per cent up to fifteen, have they not?

Mr. Hoffheimer: Same objection.

The Commissioner: Note the objection.

A. I couldn't tell that, without looking it up, but I know there was a period when no dividends were declared; and I believe the highest rate of dividend was 15 per cent.

Mr. Weil:

Q. What is the capital stock of the Peoples Natural Gas Company?

Mr. Hoffheimer: Same objection.
The Commissioner: Let the objection be noted.

A. Eleven million outstanding.

Mr. Weil:

Q. Of course the dividends would be declared upon the capital stock?

A. Yes sir.

1036 Q. Could you get for us a statement of the amount of dividends declared from the time that the present owners acquired the company, giving the amount each year?

Mr. Hoffheimer: Same objection.
The Commissioner: Note the objection.

A. I can.

Mr. Weil:

Q. And will you have that done, please?
A. I will have it prepared.
Q. When you obtain the other data for which request has already been made, will you obtain that data with reference to the dividends?
A. I will.
Q. And also the amount of capital stock, each time, upon which the dividend was declared?
A. I will.

Recross-examination.

Mr. Hoffheimer:

Q. That written contract with the Hope Natural Gas Company was made in 1911?

1037 A. Yes, sir.

Q. The prior verbal contract was in substance the same as the written contract?

A. Why, I believe that was the understanding. There really was no great necessity for a contract at that time, because the Hope had a surplus of gas, and we could get all we wanted, and the contract in 1911 was made when it was seen that conditions would change and we had better get it down in writing, but the arrangements were the same.

Q. Mr. Weil has asked you for a statement of dividends declared and paid by the Peoples Natural Gas Company. I suggest that you

prepare, in that connection, a statement of income, or at least fortify yourself with sufficient information to tell us what the income and charges against income during the periods covered by dividend payments were; also, the surplus and undivided profits, and reserve accounts, if any, of the Peoples Natural Gas Company,—that to cover the same periods referred to in Mr. Weil's request for dividends?

A. I will do that.

Q. You were referring to cash dividends when you talked about dividends from 3 to 15 per cent, were you not?

A. I was.

1038 Q. Were there any stock dividends?

A. There were some stock dividends.

Q. Will you have in your account the time and amounts of those stock dividends?

A. I can include the stock dividends,—which are cash and which are stock; yes, sir.

Q. You will include that in your statement?

A. I will.

An adjournment was here taken until Tuesday, July 6, 1920, at 10 o'clock, A. M.

ORIGINAL, #20 & #21.

October Term, 1920.

THE COMMONWEALTH OF PENNSYLVANIA

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO

vs.

THE STATE OF WEST VIRGINIA.

Proceedings of July 6, 1920.

1039 And now, Tuesday, July 6, 1920, the hour of 10 o'clock, a. m., having arrived, hearing was resumed pursuant to adjournment.

W. W. FREEMAN, a witness produced in behalf of the Complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Weil:

Q. What are your initials, Mr. Freeman?
A. W. W.
Q. What is your position?
A. President of the Union Gas & Electric Company of Cincinnati.
Q. Are you an officer of the Columbia Gas & Electric Company?
A. I am vice president of the Columbia Gas & Electric Company.
Q. And are you connected with the Cincinnati Gas Transportation Company?
1040 A. I am a director of the Cincinnati Gas Transportation Company—not an officer.
Q. The Union Gas——
A. I think possibly I may be vice president of the transportation company; I am not absolutely certain.
Q. The Union Natural Gas Company—is that the name of the company?

A. The Union Gas & Electric Company, of Cincinnati.

Q. The Union Gas & Electric Company, of Cincinnati, is the distributing company that supplies the City of Cincinnati with natural gas, is it not?

A. Yes, sir, it is.

Q. Now, does it have any transportation lines, or any gas territory of its own?

A. For the transmission of gas from the gas fields?

Q. Yes.

A. No. It receives the gas at the city line.

Q. Well, it has no gas territory or gas wells or main transportation of its own?

A. None whatever.

Q. It purchases the gas with which it supplies the City of Cincinnati from other companies?

A. Yes, sir.

Q. From what other companies?

1041 A. From the Columbia Gas & Electric Company and from the Ohio Fuel Supply Company.

Q. Does it purchase any gas from the United Fuel Gas Company?

A. Not direct, but a considerable portion of the supply coming from the Columbia Company is taken from the United Fuel Company through the Columbia Company; not purchased direct.

Q. Who owns the capital stock of the Columbia Gas & Electric Company?

A. It is owned by several thousands of stockholders—the Columbia Gas & Electric Company's stock, a widely distributed stock.

Q. And who owns the stock of the Union Gas & Electric Company?

A. That stock, both preferred and common, is owned by the Columbia Gas & Electric Company entirely.

Q. And who owns the stock of the Cincinnati Gas Transportation Company?

A. The $3,000,000 of preferred stock, which was owned by the Cincinnati Gas & Electric Company, has been purchased by the Columbia Gas & Electric Company; the actual transfer has not taken place. The $2,000,000 of the common stock is in the hands 1042 of the general public, widely distributed. The preferred and common have equal voting power, so that the ownership of the three million preferred carries with it the voting control of the transportation company, which will be vested with the Columbia Company within the next sixty days.

Q. Prior to this purchase of the capital stock by the Columbia Gas & Electric Company, of the Cincinnati Gas Transportation Company, what arrangement did the Columbia Company, or the Union Gas & Electric Company, either one, have with this Cincinnati Gas Transportation Company?

A. The property of the Cincinnati Gas Transportation Company is operated by the Columbia Company under a lease of that property, which runs until 1938, I think.

Q. And when did it begin? About how long ago?

A. In 1909, or previous to that time; no later than 1909.

Q. Then the Columbia Gas and Electric Company, if I understand your testimony correctly, operated that Cincinnati Gas Transportation Company under a lease?

A. Under a lease; yes, sir.

Q. From about 1909?

A. From about 1909.

Q. And that runs until 1938?

A. Until about 1938, I think. I think that is the exact
1043 year. That lease may be 1933. It is certainly not earlier than 1933, that it expires.

Q. The Columbia Gas & Electric Company owns certain territory and wells and pipe lines in the State of West Virginia, does it not?

A. It does; yes, sir.

Q. And when was that property acquired—about what year?

A. About and since 1906.

Q. Taking as a date the last of 1919 or the beginning of 1920, say December 31 of 1919, or about January 1, 1920, what was the total investment of the Columbia Gas & Electric Company, in the State of West Virginia, in wells, territory, pipe lines, compressor stations, and so forth?

A. The investment of the Columbia Company alone was at least $11,000,000.

Q. Of what, generally, did that consist?

A. Wells, acreage, field lines——

Q. Just a moment. As we go along, suppose you give us the number of wells.

A. 253 wells, on November 30, 1919.

Q. Now, what was next?

A. 29,000 operated acres—gas territory in operation.

Q. How much unoperated?

A. 221,000 acres unoperated. 122 miles of field lines in
1044 service, two compressor stations, one gasoline station. Aggregating in value at least $11,000,000.

(Pennsylvania Exhibit No. 22 shown witness.)

Q. I show you the map offered in evidence in connection with the testimony of Mr. Wallace, and ask you if the lines of the Columbia Gas & Electric Company are correctly represented on that map, as extending from the Branchland Field to Ball's Gap, and from Ball's Gap to Kenova?

A. Those lines are the lines of the Cincinnati Gas Transportation Company, which are not included in the estimate I have given of the investment of the Columbia Company.

Q. Well, this line also extends from another field here, the Griffithsville field, east of Branchland; it runs north and into Ball's Gap.

A. That is also a line of the Cincinnati Gas Transportation Company.

Q. And from Kenova, this line extends, as indicated on this map here by the legend, 123 miles, Kenova to Cincinnati?

A. It does, yes, sir.

Q. And what line is that?

A. That also is a line of the Cincinnati Gas Transportation Company.

Q. And that is correctly set forth on the map?

1045 A. I believe that is entirely correct.

Q. Do you recall the size of this line, the diameter, from Kenova to Cincinnati?

A. That line is a 20-inch line.

Q. And from Kenova to Ball's Gap?

A. 18-inch.

Q. And the line to Branchland?

A. Is 12 inches.

Q. And to Griffithsville?

A. It is 8 inches between Griffithsville and Culloden, and the balance of the line is 18 inches.

Q. Do you know for what the investment was made in West Virginia by the Columbia Gas & Electric Company, and for what those gas lines were laid by the Cincinnati Gas Transportation Company?

Mr. Hoffheimer: Objected to, as calling for an opinion or a conclusion of the witness and as incompetent, irrelevant and immaterial.

The Commissioner: Note the objection and let the witness answer.

1046 A. Those lines were laid for the express purpose of bringing natural gas to the City of Cincinnati and surrounding territory.

Mr. Hoffheimer: I move to strike out the answer, on the grounds stated in the objection, and also for the further reason that it does not appear that the witness has knowledge of the matters testified to.

The Commissioner: Take the motion.

Mr. Weil:

Q. Where does the Columbia Gas & Electric Company, or the Cincinnati Gas Transportation lines have its connection with the lines of the United Fuel Gas Company?

A. At Ball's Gap.

Q. The gas is taken from Ball's Gap then through the lines of the Cincinnati Gas Transportation Company to Cincinnati?

A. Yes, sir.

Q. What is the investment in West Virginia of the Cincinnati Gas Transportation Company, in its pipe lines, pumping stations, compressor stations, and so forth?

A. Approximately $7,250,000.

Q. Is that in West Virginia alone, or the total?

1047 A. Oh, no, that includes Kentucky. In West Virginia alone it would approximate two and one-quarter million.

Q. And what is its total investment, including West Virginia, all of the way to Cincinnati?

A. Approximately seven million and a quarter.

Q. And that runs partly through what States besides West Virginia?

A. Kentucky.

Q. And Ohio?

A. No; the state line in Kentucky runs across the Ohio River, and this gas is served by the Transportation Company on the line in Cincinnati, so that the Transportation Company's property is exclusively in Kentucky and West Virginia. The point of supply is at the line between Kentucky and Ohio.

Q. And that is where it is delivered to the Union Company?

A. That is where it is delivered to the Union Company.

Q. How much gas was delivered last year, 1919, by the Columbia Gas & Electric Company to the Union Company?

A. Approximately thirteen and a half billion cubic feet was delivered during the year 1919 by the Columbia Company; including the gas which it obtained from the United Fuel Gas Company.

Q. And how much did you get from the Ohio Fuel Supply
1048 Company?

A. About three and a half billions, in addition.

Q. Have you collated the figures of gas consumption of the Union Gas & Electric Company for the last few years?

A. Yes, sir, we have all of those figures.

Q. Give us then, if you will please, the amount of gas consumption of the Union Gas & Electric Company from 1910 to the end of 1919, inclusive?

A. Do you wish to include or exclude the Ohio Fuel, or state it separately?

Q. I want the whose gas consumption of the Union Company.

A. In 1910, 10,100,000,000; that figure, however, includes the gas sold by the Union Light, Heat & Power Company, just across the river from Cincinnati, in the cities of Covington, Newport, Bellevue, Dayton, and other smaller communities in Kentucky, which are included as a portion of the metropolitan Cincinnati territory.

Q. And the Union——

A. The Union Light, Heat & Power Company serves those communities; that company being leased to and operated by the Columbia Gas & Electric Company. For 1911, the figure is 12,600,000,000—not attempting to give the odd thousands. For 1912, 14,500,000,000. For 1913, 15,300,000,000. For 1914, 16,200,000,000. For 1915, 16,600,000,000. For 1916, 18,200,000,000. For 1917, 19,900,000,000. For 1918, 18,300,000,000. For 1919, 16,900,000,000.

1049 Q. How many consumers has the Union Company on its lines altogether? Both Cincinnati and these other places?

A. In domestic consumers, 151,184, on the first day of June.

Q. This year?

A. 1920. Of which 28,089 were customers of the Union Light, Heat & Power Company in the Kentucky cities. In addition to which, industrial consumers—industrial plants—using a considerable volume of gas, 81 of the Union Gas & Electric Company in Cincinnati, and 9 of the Union Light, Heat & Power Company in Kentucky.

Q. How much gas was supplied to those domestic consumers during 1919? I am speaking now of both companies.

A. I understand. The consumption of domestic customers for the year 1919 was 12,400,000,000, and the consumption of the industrial consumers, 1,800,000,000.

Q. Did you supply any public institutions, such as court houses, poorhouses and hospitals?

A. Yes, sir; we have quite a number of those institutions; in addition to which, when gas is available—which it is in all except the cold winter months—the city water works plant in Cincinnati is operated on gas under their boilers, and the water works and municipal plant in Norwood. Also, the Cincinnati General Hospital, which is a very large public institution.

1050 Q. What was your experience last winter in supplying your consumers? Did you have a sufficient gas supply for your consumers?

A. No, in cold weather we were short; and in some weather so short that there was a great deal of discomfort on the part of consumers who were dependent upon natural gas for cooking and heating. That has been the situation in almost every winter—the exceptions being an exceptional very mild winter. I may say, if you will permit, that our situation in Cincinnati with regard to the shortage of gas in the winter is relieved, in comparison with the situation in some other cities, by reason of the fact that we use about 10,000,000 feet of gas daily in our electrical power house, as fuel, in place of coal. The fact that we have that steady market for 10,000,000 feet of gas daily enables us to obtain that supply throughout the year, and put that additional supply of 10,000,000 feet a day to the service of domestic consumers in cold weather. That fact improves our situation materially; but notwithstanding that, we are exceedingly short of gas when the weather is cold; and that condition exists for a good many days in each winter.

1051 Q. Is that condition getting worse from year to year, from winter to winter?

A. It is, by reason of the fact that the number of consumers is increasing, and the company has no authority to restrict the consumption of gas by consumers. Also, the company is not able to increase its supply of gas. Therefore, the condition will inevitably become some worse with each succeeding year, under similar conditions of weather.

Q. Do you supply any of the factories or industrial consumers in cold weather, or do you cut them off entirely?

A. We cut them off absolutely; our own power plant being the first industrial consumer always to be cut off.

Q. All of the gas you obtain then in cold weather is used for the domestic consumers?

A. Absolutely, in so far as we are able to control the situation. We believe it is. I may say also that all industrial consumers all the year around pay the same price for gas as the domestic consumers.

Q. Have you made efforts, and are you making efforts, to obtain gas from other sources, if possible?

A. Well, we know from our experience that it is not possible. With regard to the supply of gas from the Ohio Fuel Supply Company, the contract under which we have been obtaining such supply runs out in 1921, and we have no rights in that contract to a
1052 renewal. With regard to the supply from the Columbia Company, the limit of that supply is the capacity of the transportation line, and we have been obtaining for years the maximum supply which that line will carry. So that our position is that we have reached the absolute limit that we can expect to secure.

Q. Is there any other territory within the vicinity, or tributary to Cincinnati, to which lines could be laid?

A. No available territory of which we have any knowledge. We think we know what the situation is.

Q. As a matter of fact, have you made investigations with a view to obtaining a supply of gas for Cincinnati, if possible, by inquiries, and so forth, throughout the territory that would be tributary to Cincinnati?

A. Yes, sir, we have exhausted all of the available information with that thought in mind, and have been unable to find any additional supply.

Q. And if the gas supply from West Virginia were cut off from Cincinanti, as I understand your testimony then, you would have no gas at all for Cincinnati?

A. None, excepting a very small supply of artificial gas, which we are manufacturing and mixing with the natural gas, to relieve the situation in cold weather.

1053 Q. I was referring, of course, to the natural gas.

A. We would have no supply of natural gas, outside of what might possibly be obtained from the Ohio Fuel Supply Company, from Ohio fields. But the entire supply which we get from the Ohio Fuel Supply Company is a very small proportion of our total gas supply? And even that supply from the Ohio Fuel runs down to almost nothing, in extremely cold weather now.

Q. What is the investment of the Union Gas & Electric Company, in its distributing system, and so forth—its total investment? Include in that, that of the Union, Light, Heat & Power Company.

A. We had the gas property of the Union Gas & Electric Company appraised by Nortonburg & Whitman, Engineers, of Chicago and New York, as of September 20, 1917. Their valuation as of that date of the physical property only, pertaining to the gas department of the Union Gas & Electric Company, was $18,778,920; the unit values which were used by the appraisers for that purpose were based on values and costs prior to the war period, so that that valuation would be increased at least fifty, and more probably one hundred per cent, if the unit values were changed to correspond to costs at the present time of corresponding property.

1054 Q. And what was the total?

A. $18,778,920. That covers the property of the Union Gas & Electric Company only in Cincinnati. The valuation of the

gas property of the Union Light, Heat & Power Company as of that date would approximate $500,000 additional.

Q. In your distributing system, you deliver your gas to the consumer at what point on the street?

A. Our point of delivery——

Q. Is it at the curb or is it at the house line?

A. Yes, sir, our service ends at the curb; from that point on the consumer furnishes the equipment, with the exception of the meter, which we provide, that is in the premises.

Q. Now, each consumer builds the line from the curb, and also puts in the lines and appliances in his own——

A. In his own property.

Q. In his own property or in his own house?

A. Yes, sir; with the single exception of the meter, which we furnish.

Q. Now, what would you estimate to be the average cost of those appliances for burning natural gas, including the lines and the special appliances used for natural gas, as well as burners, grates, cooking appliances, and so forth?

1055 A. For the domestic consumer?

Q. Yes, about what would be the average cost per consumer?

A. The investment of the consumer probably ranges from a minimum of perhaps $20—taking the small customer who uses gas only for incidental cooking, the pipe—to the residence that has a complete gas range and gas furnace, running into an investment of probably $400. We have about 3,000 consumers in Cincinnati who use gas for heating their houses and have those complete equipments. The range, I should say, would be from a minimum of $20 to perhaps a maximum of $500, per customer.

Q. And that includes what?

A. That includes the expense to them of placing the gas service in the house, the piping in the house, and their interior equipment; including a gas furnace for the heating of the house, and a gas range in the kitchen, and a hot water boiler for hot water equipment, and so on.

Q. I presume in Cincinnati the consumers to whom you supply natural gas simply readapted their appliances, which they had used theretofore, to the use of natural gas?

A. That was true, to a very large extent. We have been in past years encouraging—especially the larger domestic consumers—to install new and thoroughly modern gas furnaces in their homes; leaving their coal furnace interconnected, so that in extremely

1056 cold weather when the gas is short, they can use coal on an efficient basis, and during the balance of the year use gas on an efficient basis. That has been purely from the point of view of conversation. But it is true that originally most of them simply converted their apparatus to the use of natural gas.

Q. Since the Columbia Gas & Electric Company began to supply gas to Cincinnati through these other subsidiary companies, is it not true that substantially all of the available gas supply of the

Columbia was transported from the field direct to Cincinnati, without supplying any other towns or villages, except that metropolitan district to which you refer?

A. That is true, substantially, of the Columbia Gas & Electric Company; yes, sir. It had some contracts for minor supplies of gas at intermediate points, which it has been compelled to fulfil, but the chief function of the Columbia Gas & Electric Company, in so far as its own gas fields are concerned, is to supply the Cincinnati demand.

Mr. Hoffheimer: I move to strike out that statement as to
1057 the chief function of the Columbia Gas & Electric Company, as a statement of opinion or a conclusion of the witness, and as incompetent, irrelevant and immaterial.

The Commissioner: Note the motion.

Here a recess was taken until 1:30 o'clock, p. m.

1058 Tuesday Afternoon, July 6, 1920.

And now, the hour of 1:30 o'clock, p. m., having arrived, hearing resumed, pursuant to adjournment.

W. W. FREEMAN resumes the stand.

Direct examination (continued).

Mr. Weil:

Q. Mr. Freeman, among all these companies that you named this morning, of which the Columbia Gas & Electric Company seemed to be the Poobah, you omitted the Cincinnati Gas Company?

A. The Cincinnati Gas & Electric Company. Yes, I think I failed to make any mention of that company in my testimony.

Q. The Cincinnati Gas & Electric Company has the title to all the physical property in Cincinnati, which is leased to the Union Gas & Electric Company under a ninety-nine year lease, which became effective in 1906.

Q. That is, the Union Gas & Electric Company has for ninety-nine years the use of the property which you described this morning—that is, the distributing plant, and so forth?

1059 A. Yes, sir; the use and control of the property; and the property which I testified to under the name of the Union Company is owned by the stockholders of the Cincinnati Gas & Electric Company, but under the ninety-nine year lease, is controlled and operated by the Union Company.

Q. The title to it is in the name of the Cincinnati Gas & Electric Company?

A. The Cincinnati Gas & Electric Company.

Q. Take 1919, the calendar year. You gave us the quantity of gas distributed by the Union Company?

A. Yes.

Q. Now, give us the amount of that that was supplied to you by

the Ohio Fuel Supply Company—the amount out of its own production of the Columbia Gas & Electric Company, and the amount obtained from and through the United Fuel Gas Company?

A. From the Ohio Fuel Supply Company, the amount was approximately 3,400,000,000. From the fields of the Columbia Company—The United Fuel Company supplied to the Columbia Company, for transmission to Cincinnati, 7,400,000,000 feet; the Columbia Company supplied from its own fields 8,100,000,000 feet. Those two figures, combined with the 3,400,000,000 feet from the Ohio Fuel Supply Company, represent the total volume of gas
1060 bought. The difference between the total of those three figures and the figure which I gave as to the gas sales, is accounted for in the loss in transmission between West Virginia and Cincinnati.

Cross-examination.

Mr. Hoffheimer:

Q. How long have you been connected in an official capacity, as an employee, with the Union Gas & Electric Company, the Columbia Gas & Electric Company, and the Cincinnati Gas Transportation Company?

A. Since 1913.

Q. When was the Union Gas & Electric Company organized?

A. According to my best recollection, about 1906. I have not the official record with me, but approximately 1906.

Q. The Columbia?

A. About the same time.

Q. The Cincinnati Gas Transportation Company?

A. About the same time.

Q. The Cincinnati Gas & Electric Company?

A. The Cincinnati Gas & Electric Company is successor to the Cincinnati Gas, Light & Coke Company, and has been in existence in the gas business in Cincinnati for sixty years or more.

1061 Q. It was an artificial gas company?

A. Originally it was; yes, sir.

Q. And I assume that the Cincinnati Gas & Electric Company took over the old company's plant?

A. Yes.

Q. When was that?

A. I can't give from recollection the exact date of formation——

Q. Well, approximately the same time as the organization of the Columbia and Union Companies?

A. No, the Cincinnati Gas & Electric Company was in operation prior to that.

Q. It also was an artificial gas company?

A. Yes.

Q. And I suppose an electric——

A. As an electric Company too.

Q. But the Union Gas & Electric Company has no territory—that is, no gas fields, wells or transmission lines?

A. None whatever.

Q. So far as the gas business is concerned, it is a distributing company pure and simple?

A. It is.

Q. It has no consumers outside of the State of Ohio?

A. No.

1062 Q. Except by way of distribution through its subsidiary, the Union Light, Heat & Power Company?

A. Well, the Union Light, Heat & Power Company is not a subsidiary of the Cincinnati Gas & Electric Company. It only enters into the general situation through lease of the Union Light, Heat & Power Company to the Columbia Company.

Q. Was the Union Light, Heat & Power Company also an artificial gas company?

A. It is.

Q. And I suppose that when the Cincinnati artificial plant was taken over, and the Union Light, Heat & Power plant, in the Kentucky territory, the gas lines,—that is, the main lines and service lines, distributing lines in Cincinnati and the Kentucky territory,—which had previously been used for artificial purposes, were used for natural gas distribution and service?

A. Yes; with such changes as were necessary.

Q. What changes?

A. Changes that were necessary to convert from the artificial gas to the natural gas, but in general the distribution system was the same.

Q. Well, what were the changes?

A. Why, I am not prepared to testify specifically as to

1063 what they were; I know there were some modifications.

Q. You used the old pipes——

A. The old pipes, yes. There were considerable changes in the plants for measuring devices, and different devices that are required for the natural gas from artificial gas—changes were made in the plants in the measuring stations; considerable additional equipment was installed.

Q. Measuring stations, meters and reducers, and that sort of thing?

A. Yes. Also, there have been very substantial additions to the distribution system, to meet the increase in the use of gas.

Q. The artificial gas you mention was the old gas made by retorts?

A. Yes, sir.

Q. Out of coal?

A. Yes.

Q. You gave us some figures as of November 30, 1919, with regard to West Virginia property of the Columbia Gas & Electric Company, giving us the number of wells, operated and unoperated acreage, the field lines, compressor stations and the gasoline sta-

tions. Will you give us those figures for previous years, beginning with 1910?

A. No, I can't give you the figures as to that, the reason
1064 being that this valuation of the property was made as of that date, and we haven't any previous valuations for comparison.

Q. Well, I don't want valuations, I am trying to get the number of wells.

A. Oh, we can give you the number of wells for previous years.

Q. And the number of acres, operated and unoperated?

A. Yes, we can give you those figures.

Q. The length of field lines, and that sort of thing?

A. Yes, we can give you those figures for the previous years.

Q. I will supplement that question in this way: I want those items for West Virginia, and also outside of West Virginia.

A. The number of gas wells at the end of 1912, or at the beginning of 1913, was 117; 1914, 133; 1915, 152; 1916, 183; 1917, 202; 1918, 225; 1919, is given—239; 1920, the first of the year, 255.

Q. Are you giving me figures on all gas wells of the Columbia, wherever situated?

A. Those are West Virginia only.

Q. Will you give me similar figures outside of West Virginia?

A. The Columbia Company is not now operating any gas
1065 wells outside of West Virginia, and previously had only one or two such wells, which have been abandoned—one well, which has been abandoned.

Q. They were in Kentucky?

A. In Kentucky—just one well.

Q. Now, will you give us the acreage, year by year, in West Virginia and elsewhere, if any,—operated and unoperated?

A. The operated acreage in the year 1915 was 19,424 acres; in 1916, it was 20,966; these figures are all West Virginia—1917, 23,048; in 1918, it was 28,165; 1919, 28,737.

Q. What about the period from 1910 to 1915?

A. We haven't those figures; they are not available. The unoperated, during the same years: in 1915, in West Virginia, it was 216,357, and in Kentucky, 44,965. 1916, in West Virginia, 203,-975; in Kentucky, 44,084.

Mr. Weil:

Q. These figures all mean acres?

A. Acres. 1917, 204,517; in Kentucky, 44,084. 1918, West Virginia, 184,594; in Kentucky, 42,249. In 1919, West Virginia, 180,932; Kentucky, 39,774.

Q. You didn't divide that into operated and unoperated?

1066 A. Yes, I did; I gave the operated first. These that I have just given are the unoperated, divided between West Virginia and Kentucky. All of the operated was in West Virginia.

Mr. Hoffheimer:

Q. Then I understand that the Columbia Company does not have, and during the years indicated has not had, any operated acreage in Kentucky?

A. That is correct, with the exception of one well that was operated there temporarily, and has since been abandoned.

Q. You gave us the total consumption of the Union Gas & Electric Company, including, as I understand, the Union Light, Heat & Power, for the years from 1910 to 1919?

A. Yes, sir.

Q. As I understand you, the Union Gas & Electric Company supplies consumers only in Ohio?

A. In Ohio is right.

Q. The Union Light, Heat and Power Company only in that limited Kentucky Territory?

A. That is right.

Q. What consumption did the Columbia Gas & Electric Company have during those years, by direct service to consumers?

1067 A. None in Cincinnati or in Kentucky. Its only consumption is in some intermediate points between West Virginia and Cincinnati.

Q. Well, does it have, or did it have, any consumption in West Virginia?

A. I think so.

Q. Can you give me those figures from 1910 to 1919—in West Virginia and out of West Virginia?

A. In the year 1910, the total gas sold direct to consumers by the Columbia Company was 88,911,000 cubic feet, practically all of which was sold in Kentucky—the chief consumer in Kentucky being the Maysville Gas Company, which is served by the Columbia Company and retails throughout Maysville. In 1911, the total of such gas sales was 158,672,000 feet; in 1912, 255,614,000; 1913, 363,792,000; 1914, 396,908,000; 1915, 374,224,000; 1916, 500,796,000; 1917, 755,975,000; 1918, 957,364,000; 1919, 872,289,000. Practically all of those sales, however, are in the State of Kentucky, chiefly in Maysville.

Q. In so far as sales to consumers in West Virginia are included in those figures during those years, where were and are those consumers located?

A. The points of sale in West Virginia are Branchland, Griffithsville, West Hanlon,—that is all.

1068 Q. I wish you would refer to Pennsylvania Exhibit No. 22, the map of the properties of the United Fuel Gas Company, and tell me from what gas mains that gas locally distributed in West Virginia is taken?

A. From the transmission lines of the Cincinnati Gas Transportation Company at the three locatonsi mentioned. (Indicating on map)—Those three locations are served from the transmission lines of the Cincinnati Gas Transportation Company.

Q. Those are the same transmission lines of the Cincinnati Gas

Transportation Company which you mentioned in your evidence this morning?

A. They are the lines, yes.

Q. You pointed to certain lines as lines of the Cincinnati Gas Transportation Company indicated by broken lines on the map. Are those part of the lines there laid down as lines of the Columbia Gas & Electric Company?

A. They are. Those lines are operated by the Columbia Gas & Electric Company under this lease of that company.

Q. How is that gas which is supplied locally in West Virginia taken off of those trunk lines?

A. They are tapped with the regulator stations at those lo-
1069 cations.

Q. The purpose of the regulators being to reduce the pressure which is carried in the main trunk lines?

A. To obtain the proper pressure at those locations.

Q. How about the line from Ball's Gap to Kenova, what local consumption do you have along that line?

A. The consumption over that line is very nominal, and so small that we haven't kept particular record of it. It is a very nominal consumption.

Q. But what does it consist of, in a general way?

A. Individual customers that are served under the lease—individual customers that have been served in compliance with requests for service from such customers on the line.

Q. Then I suppose you tap that line and use regulators for the reduction of pressure, the same as you have previously indicated?

A. Yes.

Q. You gave us figures of the number of consumers, and quantity of gas consumed by consumers of the Union Gas & Electric Company and the Union Light, Heat & Power Company, for June 1, 1920; in respect to the number of consumers, and for 1919, in respect to quantities. Will you give me the figures for the year 1910, to the last available date, year by year,—making a separation by do-
mestic, industrial, and any other classification which you
1070 carry?

A. Both as to the number of consumers and the consumption?

Q. Yes.

A. I can give you the consumption from 1913 on.

Q. You may do that then.

A. 1913, Union Gas & Electric Company: domestic, 7,736,000,000 cubic feet; industrial, 4,195,000,000 cubic feet; total, 11,932,000,000 cubic feet. Union Light, Heat & Power Company: domestic, 1,155,000,000; industrial, 572,000,000; total, 1,727,000,000.

1914, Union Gas & Electric: domestic, 8,710,000,000; industrial 4,095,000,000; total, 12,805,000,000. Union Light Heat & Power: domestic 1,342,000,000; industrial, 655,000,000; total, 1,997,000,000.

1915,Union Gas & Electric: domestic, 9,342,000,000; industrial, 3,168,000,000; total, 12,510,000,000. Union Light, Heat & Power

Company: domestic, 1,508,000,000; industrial, 641,000,000; total, 2,149,000,000.

1916, Union Gas & Electric: domestic, 9,896,000,000; industrial, 3,649,000,000; total, 13,545,000,000. Union Light, Heat & Power: domestic, 1,741,000,000; industrial, 789,000; total, 2,530,000,000.

1917, Union Gas & Electric: domestic, 11,585,000,000; industrial, 3,131,000,000; total, 14,716,000,000. Union Light, Heat &
1071 Power: domestic, 2,291,000,000; industrial, 519,000,000; total, 2,810,000,000.

1918, Union Gas & Electric: domestic, 10,493,000,000; industrial, 1,987,000,000; total, 12,480,000,000. Union Light, Heat & Power: domestic, 2,549,000,000; industrial, 397,000; total, 2,946,000,000.

1919, Union Gas & Electric: domestic, 10,057,000,000; industrial, 1,485,000,000; total, 11,542,000. Union Light, Heat & Power: domestic, 2,368,000,000; industrial, 320,000,000; total, 2,688,000,000.

I should perhaps say, in reference to the rapid falling off in the sales of so-called domestic gas, that in the early years of this period, the company had an industrial schedule, under which gas was sold for industrial purposes at lower than the domestic rates, and the gas then was classified according to the rates—in other words, every consumer who was on the industrial rates was treated as an industrial consumer, and the others domestic. Since the rates have been the same for both classes, we have endeavored to segregate the larger industrial consumers, irrespective of the fact that they are paying the same rate. And the use of gas for industrial purposes, through those increased rates, has fallen off.

1072 Q. Well, in regard to your smaller industrial consumers, you may have some industrial consumption in your domestic figures?

A. That is doubtless true, to some extent.

Q. Do the two classes, domestic and industrial, embrace all of the Union Gas & Electric Company's consumption?

A. All of the Union Gas & Electric Company's consumption. In addition to this consumption, there is that of the Union Gas & Electric Company in its own powerhouse, which is purchased from the Columbia Company, and which, as I explained before, is used when the gas is available only.

Q. That is, that approximate 10,000,000 a day?

A. When it is available, yes.

Q. What is the nature of the consumption of gas which you include in your industrial classification? What are the general purposes for which it is used?

A. That industrial list represents the larger consumers of industrial gas, and is segregated both for statistical purposes and also that is the list that is told to shut off when gas is short. And it represents rather large industrial plants, including the General Hospital in Cincinnati and the City Water Works, and some other large manufacturing plants that use gas when it is available.

Q. What is the general nature of those manufacturing
1073 plants?

A. There is the Boldt Glass Company, the Le Blond Ma-

chine Tool Company, Cincinnati Shaper Company, the City Ice Company.

Q. What do they use gas for?

A. In their boilers, for fuel.

Q. How is that?

A. Under their boilers, for fuel, in place of coal.

Q. Boilers and fuel, in manufacturing processes?

A. Yes. The total of that in 1919 represents about 12 per cent of the total.

Q. You gave us the figures for 1919, deliveries by the Columbia Gas & Electric Company and the Ohio Fuel Supply Company to the Union. Can you give us similar figures, year by year, from 1910 to 1919?

A. I think so. 1910, gas furnished by the United Fuel Company was 3,901,000,000 feet. That furnished by the Columbia Company direct, 4,593,000,000; furnished by the Ohio Fuel Supply Company 2,600,000,000.

1911, United Fuel, 6,094,000,000; Columbia, 6,165,000,000; Ohio Fuel, 2,008,000,000.

1912, United Fuel, 7,191,000,000; Columbia, 7,110,000,000; Ohio Fuel, 2,298,000,000.

1913, United Fuel, 6,322,000,000; Columbia, 8,356,000,000; Ohio Fuel, 2,508,000,000.

1074 1914, United Fuel, 6,068,000,000; Columbia, 9,923,000,000; Ohio Fuel, 2,775,000,000.

1915, United Fuel, 6,422,000,000; Columbia, 9,180,000,000; Ohio Fuel, 3,003,000,000.

1916, United Fuel, 7,980,000,000; Columbia, 9,960,000,000; Ohio Fuel, 3,140,000,000.

1917, United Fuel, 10,231,000,000; Columbia, 10,510,000,000; Ohio Fuel, 3,378,000,000.

1918, United Fuel, 8,570,000,000; Columbia, 9,010,000,000; Ohio Fuel, 3,423,000,000.

1919, United Fuel, 7,431,000,000; Columbia, 8,192,000,000; Ohio Fuel, 3,459,000,000.

Q. When you speak of United Fuel Gas, you refer to the gas delivered by the United Fuel Gas Company to the Columbia Gas Company?

A. To the Columbia at Ball's Gap.

Q. Where does that gas of the Ohio Fuel Supply Company come from?

A. Ohio and West Virginia.

Q. Where is delivery made by the Ohio Fuel Supply Company?

A. In the City of Cincinnati, at the measuring station in Norwood.

Q. Are the lines of that company shown on this map to which we have referred, Pennsylvania Exhibit No. 22?

1075 A. Apparently not. This map shows one of the lines of the Ohio Fuel Supply Company.

Q. Where?

A. This map shows the point of delivery from the United Fuel

Company to the Ohio Fuel Supply Company, at Spencer, West Virginia.

Mr. Weil:

Q. Not at Spencer?
A. At Ravenswood, West Virginia.

Mr. Hoffheimer:

Q. Then the Ohio Fuel Supply Company itself has no production in West Virginia?
A. Not to my knowledge.
Q. Has it its own production in Ohio?
A. Yes, it has its own production in Ohio.
Q. What proportion of the Ohio Fuel Supply Company's gas is from Ohio, and what proportion in West Virginia?
A. That is not within my information.
Q. How is that?
A. That is not within my knowledge. It is an internal matter of their own, in which we have no particular interest. We buy from them in Cincinnati.

1076 Q. You do know, as a matter of fact, that relatively small quantities of gas come from, or are produced in, Ohio by your company, do you?

A. Personally, I am not advised as to the quantity of our supply from them which they obtain in Ohio.
Q. And I assume then that you don't know anything about the direct consumption, if any, of the Ohio Fuel Supply Company in West Virginia or elsewhere?
A. No, I have no knowledge on that.
Q. Are you an officer of the Ohio Fuel Supply Company?
A. No.
Q. Who are the officers?
A. Mr. George Crawford is president——
Q. George W. Crawford?
A. George W. Crawford, yes,—is president of the Ohio Fuel Supply Company. There is no financial connection whatever between the Ohio Fuel Supply Company and the Columbia Gas & Electric Company.
Q. Who are some of the other officers of the Ohio Fuel Supply Company?
A. Mr. Girard is vice president and general manager, I think, located in Columbus; I think Mr. Fred Crawford is the vice president. Mr. John M. Girard is the active executive, I think.

1077 Q. From whom did the Columbia Gas & Electric Company acquire its West Virginia property?

A. I can't answer that, from personal information. I have no knowledge on that point. I presume they acquired that property the same as every other gas company did—taking up leases and acquiring property in the usual way.

Q. Are you testifying to that, or is that your supposition?
A. That is my opinion.
Q. Have you any information on it?
A. Not firsthand information.
Q. Where did you get the information that the Columbia acquired its territory and pipe lines in West Virginia in 1906?
A. From the records of the company, to which I have access, and to which I have very frequent occasion to refer.
Q. And in getting that date, you didn't take the trouble to find out from whom or how it was acquired.
A. No.
Q. Where did you get your figures on the investment of the Columbia Gas & Electric Company in West Virginia?
A. From our records.
Q. As of what date did you give that investment?
A. The date I testified to,—November 30, 1919.
1078 Q. What did you include in that investment?
A. The items to which I testified,—the wells, operated and unoperated acreage, field lines, compressor stations, gasoline station.
Q. On what basis do you value your acreage, operated and unoperated?
A. At $200 per acre, operated; at $10 per acre, unoperated.
Q. On what theory did you place those valuations on that property?
A. Based on the best engineering experience and advice that is obtainable, combined with the exercising of our own business judgment and experience as to such values.
Q. Who is some of that best engineering advice?
A. We have our own staff of engineers, in addition to which we employ extra advice whenever it seems desirable or advisable.
Q. Who else besides Mr. Samuel S. Wyer?

Mr. Weil: The witness has not testified to Mr. Samuel S. Wyer; I don't know whether he was consulted or not. I would like to have the witness state whether Mr. Samuel S. Wyer was consulted among others.

The Witness: Dr. R. C. White, State Geologist of West
1079 Virginia, has advised us on matters. I may say we wouldn't refuse to accept a figure, even though it were suggested by Mr. Wyer, if it were correct in our judgment.

Mr. Hoffheimer:

Q. Let me see if I understand you correctly. When you talk about an investment of $11,000,000, are you talking about the amount of money invested in the property, or are you talking about a valuation placed upon the property?
A. I am not undertaking to say what the actual cash invested by the Columbia Company was, because that information is not obtainable; we have no means of ascertaining the actual amount of money which was put into this property by the Columbia Company, but in all of our property——
Q. Why have you not?

A. The figures are not available.
Q. Why are they not?
A. There are no records to give that information.
Q. As a matter of fact, you would have to go back into the records of some pre-existing companies which made the original investment?
A. Well, we whould have to have records which do not exist, so far as we know. We have endeavored to the utmost of our abil-
1080 ity to ascertain that information. It is not available. We have undertaken also to value the property, as conservatively and fairly as possible, based on the best engineering opinion.
Q. And the reason you don't have the information is due to the fact that there were previously existing companies who held the property that was taken over by the Columbia Gas & Electric Company, and the record of those previous companies the Columbia Company does not have?
A. Well, I am not prepared to say what was or what was not. All I know is, we haven't the records, and we can't get them.
Q. Were there previous companies who owned that property?
A. I don't know. I only know what our limitations are; all the reasons for the limitations, I am not willing to surmise even.
Q. Your mind is a total blank on that subject then?
A. No; my mind is by no means a blank. I know what we have got, and what we haven't got; you want me to say why we haven't got it.
Q. So far as you know then, there were no pre-existing companies?
A. I am not undertaking to testify whether there were or were not. I am trying to testify as to facts I know about, and not
1081 presume as to facts I don't know about.
Q. Now, then, to come down to a fact, suppose you answer this directly: Does the $11,000,000 which you gave us as the investment of the Columbia Gas & Electric Company in West Virginia represent money invested, or does it represent valuation of property?
A. It probably represents both, as near as we can arrive at it.
Q. Leaving out the probabilities, which is it?
A. My judgment is that it is both. I know the property couldn't be reproduced for that. My judgment is it cost that, as near as we can arrive at the facts.
Q. What do you understand by "investment"? Do you mean money invested in property, or do you mean the value of the property itself?
A. They ought to correspond, if there has been the exercise of proper business judgment in the development of the property.
Q. Well, how much of that $11,000,000 represents money put in, and how much is represented by value of property?
A. I think, as I said, it represents a fair valuation of the property, and it indicates the probabilities as to the actual money that was put in.
Q. In other words, you regard the $11,000,000 as representing fair value, and as probably representing the investment. Is
1082 that it?
A. Yes, sir.

Q. Well, how about the figures you gave us on the Union Gas & Electric Company? Were they arrived at in the same way?

A. Arrived at in the same way. I stated these were the valuations determined by engineers, the most competent engineers we could employ, for the purpose of arriving at the probable investment and the fair value of the property at that date; and, as I testified, the values, arrived at in the same way, today would be anywhere from 50 to 100 per cent higher than those figures.

Q. Then in the same way, that Union Gas & Electric Company investment which you gave us, was what you regard as actual value and what you regard as probable investment?

A. Yes.

Q. What the actual investment is you don't know?

A. No. No one else, so far as I am able to discover.

Q. That is what I want to get at. On what basis was that investment of the Union Gas & Electric Company, or its property value, ascertained?

A. On a basis of replacement as of this date in 1917—September 20, 1917, and that figure excluded any property acquired by the company and the amount of money expended to acquire it, which had been abandoned in the meantime.

1083 Q. Then as you figure, it would cost so much to purchase and lay so many miles of pipe?

A. To reproduce it in its present condition at that date.

Q. How much was included for going value?

A. Nothing. That was actual physical value. Intangibles were not included. I can give you a valuation on the intangibles—with intangibles in, if you would like it.

Q. I asked you in a previous question, which I think you overlooked in answering it——

A. I am sorry.

Q. I asked you as to the number of consumers of Union Gas & Electric Company——

A. In those preceding years?

Q. Yes.

A. I am afraid I haven't that information available. We could ascertain it, but I didn't anticipate that, and I didn't bring a volume of records which would contain that. We of course keep those statistics. I may say that the growth of consumers in Cincinnati has been normal since I have been personally connected with the company, and the rate of growth has been small, because property has been practically saturated for years, and Cincinnati has not been a community that has had very material growth, so that probably five per cent, and less than five per cent, per year, would rep-

1084 resent the growth in the number of customers,—I say, since I have been with the company, since 1913. Of course, there was a very rapid growth in the number of customers between those using artificial gas and those using natural gas, best indicated by the fact that the maximum output capacity in the old artificial plant was 7,000,000 feet a day,—now, in the winter, we frequently run as high as eighty-five to ninety million feet a day.

Q. What you had to say as to the basis of valuation or investment of the Union Gas & Electric Company assume applies equally to the Union Light, Heat & Power Company?

A. Yes.

Q. You were speaking of the consumption of your power house; what is your average daily consumption?

A. Of gas?

Q. Yes.

A. About 10,000,000 cubic feet.

Q. That is an electric power house?

A. It is for the manufacture of electric current, yes.

Q. You supply power where?

A. Throughout the territory, chiefly in Cincinnati. We have some transmission lines running as far as Hamilton, Middletown.

Q. Does that include electricity for illumination?

1085 A. Yes, illumination and power. The power also goes over to Kentucky, and furnishes service to the Union Light, Heat & Power Company, to the Cincinnati, Newport & Cunningham Street Railway Company; and also some of that current, through transmission line, goes to Indiana.

Q. During how much of the year do you consume that 10,000,000 feet a day at the power house?

A. From about April until October, rather steadily. After that time we have to keep a certain number of the boilers operating under coal, so as to be quickly able to handle the service, and during the late spring months and the early winter months, or the fall months, we use partly coal and partly gas. Then from, perhaps the 15th of November, when the demand for gas is such as to exhaust the supply, we practically cut off gas entirely throughout the balance of the winter.

Q. Well, from the 15th of November on, during the cold weather——

A. To the 15th of March, we use coal exclusively, you might say.

Q. How much gas do you use daily from the first of October to the 15th of November, in that power house?

1086 A. That depends altogether on weather conditions. We might use a million feet a day, and we might use up to three or four million feet a day; it all depends. Our use of the gas is primarily for the benefit of our gas consumers, in order that we may maintain that volume of supply throughout the year and have it available. There isn't any gas company that could purchase 10,000,000 feet of gas a day between November and March, and not use that gas throughout the remaining portion of the year.

Q. In other words, you are trying to equalize your peak load by using that gas?

A. It is not quite that. That peak load would not be obtainable at all, unless we found we could use it in our own property, or a market for that gas, during the balance of the year, so that we can go out and purchase gas for all year round. And our use of gas is not for economical reasons in our electric plant anything like as much

as it is for the protection of our domestic gas consumers in the winter.

Q. Where did you say the gas is delivered by the Columbia Gas & Electric Company to the Union Gas & Electric Company?

Mr. Weil: You mean to the Cincinnati Gas Transportation Company?

1087 Mr. Hoffheimer:

Q. I understand that the Columbia Gas & Electric Company leases the Cincinnati Gas Transportation lines; is that it?

A. Yes. The point of delivery to the Union Company is at the station there in Cincinnati, on the Ohio River side of the Cincinnati Gas Transportation line, where it connects with the distribution system.

Q. I am right in thinking, am I not, that the delivery is made by the Columbia Gas & Electric Company——

A. Yes.

Q. —through the Cincinnati Transportation Company's leased lines?

A. Exactly. That has no relationship with the supply of the Ohio Fuel Supply Company.

Q. When you spoke of deliveries being made at that point, I suppose you have no permanent arrangement of any kind with the Columbia Gas & Electric Company for the delivery of gas to the Union Gas & Electric Company?

A. It was done under contract.

Q. Do you have a contract?

A. Yes.

Q. How long has that contract been in force?

A. Since the delivery began.

1088 Q. What is it—in writing?

A. Oh, yes.

Q. That is the instrument under which these deliveries are made and have been made in the past?

A. Yes, sir.

Q. Who is the custodian of that contract?

A. It is in the office of the Columbia Gas & Electric Company, and a copy in the office of the Union Gas & Electric Company.

Q. Where?

A. In Cincinnati.

Q. Who is the officer having it in charge?

A. I presume it is in my custody. The secretary of the company has direct custody of the files. I have access to the contract whenever I choose to see it.

Q. Does that contract fix the amounts, times, terms and prices of delivery?

A. Yes.

Q. You have neither the original nor a copy of it here with you in Pittsburgh?

A. No.

Mr. Weil: In order to simplify this,—if counsel for the defendant desire that this contract be produced, so that they can
1089 offer it if they so desire, we will undertake to have a copy of it produced at our next hearing.

Mr. Hoffheimer: In that event, we would be glad to avail ourselves of the suggestion of counsel.

The Witness: It isn't necessary to have the original. There are printed copies of it. I did not deliberately omit bringing one; it just did not occur to me.

Mr. Weil: I will just say this: A copy with an affidavit to the effect that it is a copy will be sufficient—or do you want the original, to compare?

Mr. Hoffheimer: We will accept the professional statement of Mr. Alderdice, the counsel of the company, that it is a correct copy.

Mr. Hoffheimer: Let me ask, in the same connection, is it practicable to have a similar arrangement with regard to the Ohio Fuel Supply Company's contract?

Mr. Weil: I will consult with the officers of the Ohio Fuel
1090 Supply Company, and ascertain from them whether or not they have any objections to the production of that contract, and if there is none on their part, we will undertake to get a copy of it for you. There will be officers of the Ohio Fuel Supply Company on the stand before we get through with the hearing.

Mr. Hoffheimer:

Q. As I understand, there is a contract under which deliveries of gas are made, and have been made, by the Ohio Fuel Supply Company to the Union Gas & Electric Company?

A. There is such a contract, yes.

Q. That contract, I assume to be in writing and in the same custody to which you have referred in relation to the——

A. That is true, as to our copy, yes.

Q. How long has that shortage of gas in Cincinnati and the territory supplied by the Union Light, Heat & Power Company been experienced?

A. It has always existed during my connection with the company, since 1913. There has been a shortage in each year. I don't think my coming to the company had anything to do with it.

Q. And according to your information, it existed before?
1091 A. Yes.

Q. That shortage is gradually increasing?

A. Yes. The situation is becoming more acute.

Q. You recognize that the time is approaching when, by some means or other, the consumption will have to be cut down in the territory served by you?

A. The demand will have to be regulated so as to apportion the available supply of gas in such manner as will correct the present unfortunate conditions in extreme weather.

Q. Your present plan is to limit the purposes for which the gas is consumed?

A. The plan that has been in operation is to curtail industrial

consumption; which does not meet the situation, only ameliorates it slightly.

Q. Why do you say that?

A. Because the shortage is due to the fact that the demand for gas for domestic purposes alone exceeds the available supply in extreme weather. Therefore, if all the industrial gas is cut off, you have not solved the question.

Q. As a matter of fact, from an operating standpoint, you recognize it as almost necessary to keep your industrial consumption during the periods when the weather is not coldest, when the
1092 domestic consumption is not at the greatest?

A. It is absolutely necessary to maintain the company in business until such time as rates are fixed for industrial gas that will enable the company to operate——

Mr. Weil:

Q. You mean, for domestic?

A. —for domestic gas, as will enable the company to operate on a domestic basis.

Mr. Hoffheimer:

Q. What you mean to imply is this: To cut off the industrial consumption would require the domestic rates to be raised very considerably?

A. Very materially. Very materially, if the company is to meet its operating expenses.

Q. And that is because, if you didn't have the industrial consumption, you would have a considerable portion of the year when a good deal of your plant, or the capacity of your plant, would be standing idle?

A. Exactly; and at the time when your plant was being used to its capacity, its maximum capacity, there wouldn't be sufficient revenue to meet the expense of operating.
1093

Q. And putting it the other way: Your industrial consumption keeps down the price to the domestic consumer and helps to pay your operating expenses?

A. It does, absolutely.

Q. Well, if the cutting off of the industrial consumption is not the remedy for your gas shortage, the only other remedy, as I understand, is to limit the purposes for which the domestic gas supply is used,—is that right?

A. The whole problem could be covered automatically.

Q. How?

A. By proper price schedule, which would not in express terms prohibit any use of gas, would permit the free use of gas to any extent for which the consumer was willing to pay the price.

Q. Then you come back to this: If you make your domestic rates sufficiently high, the consumer himself will cut down his own consumption?

A. Exactly. The industrial consumer will take care of himself.

Q. Well, taking into consideration the past experience with gas shortage, and the known fact that you have not been able to discover any other available territory, and are not going to get any further gas supply, as far as you know, are you going to
1094 reach a day or a time when you won't have enough gas for all of your domestic consumption?

A. If the price fixed were correct, we would, in my judgment, be able to maintain a sufficient supply of gas in Cincinnati, to meet the demand which would come to us, at a proper schedule of rates. I believe the shortage probably would be solved. I believe the consumers would be satisfied, because they would be receiving a commodity at a price lower than any corresponding is available. The Company would continue in the gas business for a good many years on a satisfactory basis.

Q. Putting it in another way: The increase of the domestic rates will eliminate enough consumers or consumption to leave sufficient gas for the domestic purposes of those who are left?

A. It will eliminate enough consumption. That elimination will largely be in the matter of conserving and in economy of consumption, rather than a wasteful consumption of gas. I don't mean it will eliminate customers, but it will promote an efficiency in the use of gas that will enable the consumers to get a satisfactory service from the volume which we think we can produce in our territory.

1095 Q. From that point of view, what will be eliminated in the way of consumption?

A. Very much more efficient apparatus will be used.

Q. What else?

A. The wasteful use which comes from indifference, because of the cheapness of the product.

Q. When that time of elimination of wastefulness comes, what domestic uses will be left, as you understand it?

A. It will be used very generally for cooking purposes, for incidental uses of gas in the household, and for heating in moderate weather.

Q. And in weather which you do not describe as moderate, what would have to occur?

A. The consumer would use coal.

Q. That is, people would have to instal coal furnaces?

A. A duplicate system—if they want to use gas at all.

Q. In that eliminated consumption—or economical consumption situation which you have in mind, do you include the use of natural gas for lighting purposes?

A. To any extent desired by the consumers, yes.

Q. The truth about it is, that the greater proportion of the people in Cincinnati today use electric light, do they not?

A. No, not the greater proportion. We have approximately
1096 120,000 natural gas consumers within the city limits of Cincinnati, and we have about—less than 40,000 electric consumers. The greater portion do not use electricity.

Q. Are there any other electric light companies in Cincinnati?

A. None.

Q. Did I correctly understand you to say that your company regarded itself bound to extend its service of gas to whoever applied for it within the territory served by it?

A. Well, if they are on our lines. If they are on our lines, we feel compelled to give them service. We are not compelled to make extension of service, except upon grounds that are reasonable.

Q. But you are compelled to extend your lines within a reasonable distance which your territory covers?

A. We are acting on that theory.

Q. You understand that to be your obligation under the Ohio law?

A. Personally, I do not understand we are obligated to make other than the service on the lines of our system. I do not understand that under the laws we are compelled to make an extension. But we do make extensions on a basis which we think is reasonable.

1097 Redirect examination.

Mr. Weil:

Q. Mr. Freeman, in the interesting theory you have expounded for preserving and continuing the opportunities for supplying gas to consumers—domestic consumers—you stated that it would depend upon the question of price. Did you contemplate or intend thereby that you would have different prices for the different domestic uses to which the gas would be applied?

A. No, different quantities—for the different volumes of gas. We would like the basis of charging for gas to follow the plan which Mr. Daly has put into operation in a number of communities served by the East Ohio Gas Company, whereby a block of gas commonly fixed at 5,000 feet per month is the minimum price, with an increase of five cents or more per thousand cubic feet on the succeeding block or consumption of 5,000 feet in a month. The idea of that being that a normal volume of gas for consumption in a month should be guaranteed to the people generally, at the minimum rate—that wasteful and extravagant use of gas should be penalized, in fact, and to the maximum extent possible prevented, by these higher rates for increased consumption—going up perhaps as high as a dollar or higher per thousand feet. Not with the idea that the Gas
1098 Company would be selling the gas at those high prices, but would be conserving gas through the customer voluntarily omitting to use the gas because of that high price.

Q. And that first block, as you term it, would be established without reference to the size of the house or the purposes for which the gas was to be used by the individual consumer?

A. That has been the case where that plan has been put into effect. It has generally been a block of 5,000 feet.

Q. Do they use natural gas for lighting purposes in Cincinnati?

A. Yes, to a considerable extent; with its Welsbach mantles.

Q. And you supply it for that purpose?

A. Yes.

Q. Is there any artificial gas being supplied now in Cincinnati by your company, or any other, for lighting purposes?

A. None exclusively—none that is used of itself for lighting purposes; but we have an artificial plant which we constructed some three or four years ago, with the hope of relieving the situation in extreme weather, and we are able to produce approximately 10,000,000 feet of gas a day, through that plant, which is mixed with the natural gas and distributed in that way. There is no
1099 artificial gas as such used.

Q. And that artificial gas is run into your lines and distributed?

A. Yes, fed out as a mixed gas.

Q. For all purposes?

A. For all purposes?

Q. You gave us some unoperated territory owned by the Columbia Gas & Electric Company in the state of Kentucky, also a certain quantity in the state of West Virginia?

A. Yes.

Q. Directing your attention, in the first instance, to the unoperated territory in Kentucky, is that territory proven gas acreage?

A. I should say that it could hardly be regarded as proven gas territory at present, in view of the fact that there are no wells being operated. It is property that the Columbia Company controls and thinks it is advisable to hold for further development purposes. It can hardly be regarded as proven territory today.

Q. In other words, that is what you would call wildcat or prospective territory, is it not?

A. It is prospective territory.

Q. On which you hope at some time to produce gas?

A. We hope so, or we wouldn't hold the leases.

1100 Q. Is the same true of the unoperated territory which you hold in West Virginia?

A. It is generally true—Of course, any gas company that hasn't any very considerable area of reserve territory would very soon be out of gas, because every well runs down from the day it is started. It is considered by the Columbia Company a reasonable reserve of acreage, which it will develop as rapidly as occasion requires.

Q. And is that territory proven territory?

A. It is, to some extent; there are wells adjacent.

Q. Are there portions of it which are the same as you have described, with reference to the Kentucky territory?

A. There would be a portion of that.

Q. Have you considered, as one of the means of conservation, the adoption of an absolute limit of a certain quantity as the maximum that any domestic consumer can use?

A. The serious difficulty of such a limitation, in my judgment, aside from its perhaps being inequitable to consumers, would be the difficulty of its enforcement. If our company were expected to police 120,000 consumers and undertake to engineer their use of gas, that would be an undertaking that we could not assume. Our feeling is that people ought to be entitled to use the gas if they are willing to

pay the price of gas for that use, with due regard to the inter-
1101 ests of all concerned. And any plan that can be put into effect automatically and fairly to all is a very much better plan than some theoretical limitation which is impractical in enforcement. We feel we should not undertake to enforce— we should not be the policemen for 120,000 consumers; we couldn't undertake the job and couldn't execute it if we did.

Q. Have you considered, among the other means of conservation, the plan of limiting the specific uses to which the gas may be put by the domestic consumer, as, for example, to prevent its use for heating purposes, except as incidental to the use of the cookstove, a certain grate, for running instantaneous water heaters, and the like, and prohibit its use in the heating furnaces of the domestic consumer?

A. We have given some thought to that suggestion, and are rather of the opinion that a prohibition of that sort might be successfully attacked in the courts as unconstitutional. It has seemed a question whether the State or the authorities have the right to say to a man, "You can use gas for one use, but your neighbor can't use it for a different use." So we think there are serious legal difficulties in-
volved in that, and that it is preferable to have a plan of pro-
1102 cedure that is free from those objections, that does not deny any man the use of gas as he elects, providing he pays a proper price for it, and does not injure anybody else's interests in the gas supply.

Q. You have considered then substantially all of the methods that have been suggested in recent years for conserving of gas, by preventing or by reducing its consumption, have you not?

A. We have, indeed. Of course, the trouble, Mr. Weil, is that we have the problem on our hands and perhaps give it the most thought—that we have no authority to act in the matter. We are operating under a rate ordinance which is effective until next year, until next fall, whereby a maximum price of 35 cents is fixed. The authority in this matter is vested in the Common Council of the City of Cincinnati, and thus far we are doing all the thinking and they are doing nothing, and until they take the bull by the horns and assume a little responsibility for solving this question, present conditions will continue. We hope they will take the matter up in a broad way, with due regard to all the conditions, and attempt to apply the proper remedy. If they put it in our hands, we think we could solve it very quickly.

Q. Have you made any estimate, after these methods of
1103 conservation to which you have referred are adopted, as to the length of time you would be enabled to continue in the natural gas business, and supplying gas to domestic consumers?

A. We think that with our reserve acreage—speaking of the Columbia—we hope, at least, that we can continue about the present volume of gas, to Cincinnati and our Kentucky territory, for a good many years. That will, of course, be dependent on our ability to raise the necessary capital to do the additional drilling, the cost of which has gone up enormously—and all of that falls back upon your

being able to sell your product at such a rate as will yield a return to meet all of those necessities, and with a rate that will justify securing needed capital for extensions, with proper conservative practice, and a rational rate schedule, maintaining the actual demand with about the present volume of supply, it is our expectation that we will be able to continue about that supply for a considerable period to come.

Q. Have you made any estimate——

A. That would be absolutely impossible. If we were to meet increased demands from other quarters—and were it not for the fact that we have in our own property considerable reserve acreage.

1104 Q. Taking all of those things into consideration as you have done, have you made any estimate on the length of time, even under those conditions, that you could continue to supply your present domestic consumers?

A. Not when it comes down to figure at a certain number of years.

Q. That is what I mean.

A. Conditions have changed so much in the natural gas business in my comparatively brief experience in it that it would almost seem that any man who undertakes to be a definite prophet is likely to fool himself. I think it would be unwise to undertake to say what would be the exact condition even ten years from now, not to say twenty or twenty-five; but I think the situation, with proper remedies applied, is rather hopeful for a reasonable period of time at least.

Q. Ultimately, however, unless new gas fields are discovered and new sources of supply developed, the supply of natural gas as at present conducted, for even domestic consumers, will end?

A. Ultimately, yes, beyond a doubt.

Q. The time that you don't want to even guess at, at the present time?

1105 A. I would rather have Mr. Daly guess at that than that I should try to; he has been in the business a great many years in comparison with the number of years I have been in it.

Recross-examination.

Mr. Hoffheimer:

Q. Mr. Weil asked you about your unoperated acreage. Is that some of the acreage which is carried in that valuation or investment account to which you referred?

A. Yes. The figure that is put on that is based on average conditions. If that were proven territory, it would not be put in at $10 an acre, it would be put in at the higher figure of $200 an acre. Those considerations are average, in the valuation.

Q. That applies both to Kentucky and West Virginia?

A. It does, yes.

Q. How is that unoperated territory carried by your company—by the Columbia?

A. On its books?

Q. Yes.

A. Well, it is all included in the Plant and Property account. It is not segregated in the books.

Q. Where do your delay rentals come from, out of your operating income?

1106 A. Rentals are paid out of operating income, yes.

Q. Charged up as an operating expense?

A. Yes.

Q. That is true as to operated acreage also?

A. Yes.

Q. It always has been since you have been in the company?

A. It always has been.

An adjournment was here taken until Wednesday, July 7, 1920, at 10 o'clock A. M.

ORIGINAL, #20 & #21.

October Term, 1920.

COMMONWEALTH OF PENNSYLVANIA
vs.
STATE OF WEST VIRGINIA.

STATE OF OHIO
vs.
STATE OF WEST VIRGINIA.

Proceedings of Wednesday, July 7, 1920.

1107 And now, Wednesday, July 7, 1920, the hour of 10 o'clock, A. M., having arrived, hearing resumed pursuant to adjournment.

JAMES H. REED, a witness produced on behalf of the Complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Weil:

Q. Mr. Reed, you are an officer of the Philadelphia Company?
A. At the present time, I am vice president; senior vice president, I believe they call it.
Q. And you are also an officer of the Equitable Gas Company?
A. Vice president.
Q. You were at one time president of the Philadelphia Company, were you not?
A. Yes, sir.
Q. From what year until when?
A. From about March, 1899, until the spring of 1919. I can't tell you the date exactly, but it was about March or April,
1108 1919, when I resigned. **Twenty years in all.**
Q. Prior to that time, were you connected with the Philadelphia Company in any capacity, as director?
A. No, sir.
Q. Were you counsel for the company?
A. No, sir.
Q. The Philadelphia Company owns the stock of the Equitable Gas Company, does it not?
A. Yes, sir.
Q. All of the stock of the Equitable Gas Company?
A. Yes, sir.

Q. And the Equitable Gas Company is the natural gas holding company of the Philadelphia Company, or one of them?

A. It is one of them. It operates, under lease, the holdings of the Philadelphia Company; the lines that have been constructed by the Philadelphia Company, and the territory owned by the Philadelphia Company in Pennsylvania. It also operates the lines in West Virginia, through the Pittsburgh & West Virginia Gas Company; and through the ownership, by the Pittsburgh & West Virginia, of the Monongahela Gas Company, it operates that company. Practically, the Equitable Gas Company is the operating company.

Q. The Philadelphia Company originally supplied what
1109 places?

A. I think I would like to correct that a little. The Pittsburgh & West Virginia Gas Company operates itself, and furnishes the gas at the state line, to the Equitable Gas Company.

Q. The Philadelphia Company originally supplied what places with gas, what cities and towns?

A. Well, if you will let me state the history——

Q. Sir?

A. If you will let me start it in Mr. Westinghouse's time, in my own way, I can tell you.

Q. I would be very glad to have you do that.

A. About some time in the year 1883 or 1884, George Westinghouse drilled a well on his place at Homewood, in the City of Pittsburgh, and he developed a very large volume of gas, for which he had no use. He was drilling for his domestic purposes and he had more gas than he could possibly use. He then to dispose of it bought the charter of the Philadelphia Company. That company was organized under a special law passed in 1871, and was originally known as the Empire Contract Company. It had all the powers conferred upon a Pennsylvania company by statute. There were about seven or eight of those special acts passed in 1871; prior to the adoption of the present Constitution of Pennsylvania, which did away with Special Acts, and the Empire Contract Company had a variegated career. Among other
1110 things, it was used as a contracting company, and built the Mexican National Railway. At all events, he found that charter and acquired it and reorganized the company and gave it the name of the Philadelphia Company—which don't mean anything—and first obtained an ordinance of the City of Pittsburgh to himself and his associates, for the purpose of supplying natural gas to people in Pittsburgh. He transferred that ordinance to the Philadelphia Company—It was worded so it could be transferred, —made to him and his associates and assigns—and proceeded to organize his company and go into business. He laid lines at various places in the City of Pittsburgh and then set about to acquire the holdings of other companies. The first lines he laid—Well, he acquired a number of little companies; I have forgotten the names now—but the first lines he laid were to Murrysville and

up the Allegheny River into the Armstrong County field; and he went actively into the business of supplying gas for domestic use and to some manufacturers that he could reach with his lines. The Philadelphia Company afterwards acquired the holdings of the Hostetter people; I think that was called the Fuel Gas Company, but I don't remember definitely. It acquired the
1111 holdings of the Carpenter Gas Company, and the Acme, and a company that had been formed for the purpose of bringing gas down the Allegheny River to the mills, and up along the river, around 33rd Street, and from there up to the City Line, including the Carnegie plants at 33rd Street, and he generally branched over the City of Pittsburgh. The company subsequently acquired the controlling interest in the Allegheny Heating Company, a majority interest of the stock, and made a contract with the Allegheny Heating Company, which opened up the City of Allegheny, where they supplied a large number of domestic consumers. They subsequently made a sort of operating agreement with the Chartiers Valley Natural Gas Company, which had run a line across the Allegheny River and was supplying the mills down below the "Point"—the La Belle Steel Company, I think it was, and Lindsay & McCutcheon. And that was about the condition we found it in, in 1899. Their principal gas supply at that time came from the Murrysville Field and the Armstrong County field.

Q. The Murrysville field was in what county?

A. Westmoreland County. I should have said that in 1887, the Philadelphia Company bought the controlling interest in the Pennsylvania Natural Gas Company, through which they were able to reach some territory in Washington County as well as ac-
1112 quire additional distributing lines. In 1889 or 1890, the Philadelphia Company laid a line to the Bellevernon field on the Monongahela River.

Q. In what county?

A. Well, I think that is Fayette County—Yes, Fayette County. In 1894 or 1895, the company began to acquire leases in Greene County, Pennsylvania, and they also took some leases in Wetzel County, West Virginia. In 1894, the Company began erecting pumping stations and compressing stations. They had one at Canonsburg, one in Armstrong County and one in Murrysville. I don't know whether I am putting this in just as you want it.

Q. That is all right. Go right ahead.

A. In 1895, the Philadelphia Company of West Virginia was organized, all of the issued stock being held by the Philadelphia Company; and that company laid nearly 34 miles of line in West Virginia, which, from Mr. Westinghouse's annual report, reached territory that they had acquired through the purchase of the Devonian and Victor Oil Companies.

Mr. Hoffheimer:

Q. What was that first company?

1113 A. The Devonian.

Mr. Weil:

Q. Just one moment there, judge, please. At that time, when you went into West Virginia, were your——

A. The company went in. I wasn't with them.

Q. When the company went into West Virginia, were the Pennsylvania gas fields becoming exhausted at that time, or insufficient to supply the demands of the company, if you know?

A. Well, judging from the records of the company, its reports, and so on, they were; not exactly exhausted, but they were insufficient to supply the number of consumers which the Philadelphia Company had taken on.

Q. Now, go ahead with your story.

A. Well, I find that in 1895 and 1896, the company constructed a line from its lines in Greene County to the Big Moses well, in Tyler County, West Virginia; and Mr. Westinghouse mentions the necessity of borrowing money for further extensions in West Virginia—further extensions of lines in West Virginia, in 1896 and 1897. The people that I represented acquired the stock of the Philadelphia Company, the controlling interest, practically all of it—there were a few people who stood out—in 1899; and they
1114 put in a new board of directors, and I was elected president; and we began to push the business more actively than had been done before. We extended lines, increased the number of consumers, leased additional territory, largely to the southwest of Pittsburgh, in Greene County and Washington County, and in West Virginia. As I remember it, the company had about 16,000 consumers at that time, mostly domestic, in number; although in quantity probably 40 per cent of its output went to manufacturers. When I left the company, it had about 140,000 domestic consumers and perhaps 550 or 600 manufacturing consumers—I don't remember that exactly.

Q. Well, now, at the time you were elected president of the company, what was the situation as to the Philadelphia Company having sufficient gas in the State of Pennsylvania for the supply of its consumers?

A. Well, we didn't have enough gas in sight in Pennsylvania. We had to depend on West Virginia at that time, and our efforts were directed to raising money and extending lines into West Virginia.

Mr. Hoffheimer:

Q. What date did you fix in that question, Mr. Weil?

Mr. Weil: 1899, when he was elected president of the
1115 Philadelphia Company.

The Witness: In 1899.

(Pennsylvania Exhibit No. 23 shown witness.)

Q. I show you a map marked for identification Pennsylvania Exhibit No. 23, and ask you if that correctly represents the natural gas

property of the Philadelphia Company in Pennsylvania and West Virginia, as of January 1, 1920?

A. In a general way, I would say it does. It is apparently a reduced copy of the working map of the Philadelphia Company.

Q. It shows, according to the legends, the natural gas distributing plants, compressing stations, the general direction of the gas flow, and the gas fields?

A. Yes, sir.

Mr. Weil: I offer Exhibit Pennsylvania No. 23 in evidence, as a map of the Philadelphia Company's natural gas property in Pennsylvania and West Virginia.

(No objection.)

1116 Mr. Weil:

Q. Judge, when was the first compressing station built in West Virginia?

A. In 1901.

Q. And at what point?

A. Delaney No. 10 was the name given; in Wetzel County.

Q. And at that time, how many compressing stations were operating in Pennsylvania?

A. Five.

Q. Now, what was the first gas company you acquired in West Virginia, and when?

A. The Fairmont & Grafton Gas Company.

Q. At what time?

A. Bought in 1905. I might say that its name was changed and it is the company known now as the Pittsburgh & West Virginia Gas Company.

Q. Do you remember when that was, the date when the name was changed?

A. In 1913.

Q. When did you acquire the property of the Monongahela Natural Gas Company?

A. That was acquired at the same time, and that name was changed, and the stock of the Monongahela Natural Gas Company was bought by the Pittsburgh & West Virginia, and its own
1117 obligations given for it.

Q. Now, I think you stated that all of the stock of the Pittsburgh & West Virginia Gas Company is owned by the Equitable?

A. No, the Philadelphia Company.

Q. By the Philadelphia Company?

A. Yes, sir.

Q. What did you say about it being leased or operated by the Equitable?

A. I first said it was operated, but that is wrong. It is operated separately, and sells its gas at the state line to the Equitable for delivery.

Q. And it is owned then, all of the stock, is owned by the Philadelphia Company?

A. Yes, sir.

Q. And all of the stock of the Equitable is owned by the Philadelphia Company?

A. Yes, sir.

Q. Now, at the present time, how many compressing stations are you operating in West Virginia and how many in Pennsylvania?

A. Thirteen compressing stations in West Virginia and ten compressing stations in Pennsylvania. Before we leave that—I don't think I stated that in 1896, at about the time of the organization of the Philadelphia Company of West Virginia, 6,000 acres of
1118 gas territory were acquired in Tyler County, West Virginia, and thirty-three—practically thirty-four miles of pipe line laid in West Virginia, and 76 miles of pipe line in Greene County, to connect with that property. And also, Mr. Weil, the Philadelphia Company, after we took hold, bought the Union Gas Company of McKeesport—that was in 1900—which connection was for a large domestic consumption in that city.

Q. Can you give us the amount of money expended by the company in West Virginia, since the beginning of operations, approximately, separating the amount expended for improvements and the amount expended for leases, rentals, pay rolls, taxes and other items?

A. Well, it would be more or less an estimate, but I think we have expended over probably—over $20,000,000 for the first item. Then I presume as we operated at that time, an equivalent amount for the second item that you detail there in your question.

Q. In other words, that would be $20,000,000 then for improvements, about, and about $20,000,000, did you put it, for leases, rentals, pay rolls, taxes and other items?

A. Yes, sir, roughly speaking, we run about "fifty-fifty."

Q. About what?

1119 A. About fifty-fifty. You know what that means—about half and half.

Q. What?

A. Half and half.

Q. All right; I think we understand fifty-fifty better. Judge, have you prepared, or had prepared, an acreage statement of the property of the company in Pennsylvania and West Virginia, from the year 1910 to the year 1919, inclusive, of the unoperated, operated and the total?

A. Yes, sir.

Q. Will you give us the amount of the unoperated and operated acreage of the company in Pennsylvania, and the total; also, in West Virginia, of the unoperated and operated and the total, from the year 1910 to 1919?

A. (Reading:)

1120 *Acreage Statement.*

Pennsylvania.

Year.	Unoperated.	Operated.	Total.
1910	99,674½	39,536¾	139,211¼
1911	95,300¾	38,540½	133,841¼
1912	99,427¾	40,335	139,762¾
1913	95,933¾	43,008¾	138,942½
1914	115,402¼	53,505¾	168,908
1915	105,762	49,769½	154,531½
1916	85,266¼	55,648½	140,914¾
1917	75,298¼	57,222½	132,520¾
1918	74,123¼	58,859¾	132,983
1919	78,695⅝	60,268	138,963⅝

West Virginia.

1910	424,355⅞	47,240¾	471,596⅝
1911	386,649⅞	56,354¾	443,004⅝
1912	290,695⅛	67,710½	358,405⅝
1913	289,565⅜	73,168¾	362,734⅛
1914	294,009⅞	77,544	371,553⅞
1915	287,449⅜	83,594	371,043⅜
1916	267,696¼	92,035¾	359,732
1917	232,072¾	99,489¾	331,562½
1918	214,962¼	106,266¼	321,228½
1919	209,127¾	108,198¼	317,326

1121 Q. Now, judge, have you a statement of the number of gas wells in Pennsylvania and West Virginia, and the total thereof, from the year ending March 31, 1911, down to December 31, 1919?

A. Yes, sir.

Q. Being nine months of 1918, and the twelve months of 1919?

A. Yes, sir.

Q. Will you read that into the record, please?

A. (Reading):

Gas wells.	Penna.	West Va.	Total.
Year Ending 3-31-11.....	488	487	975
3-31-12.....	491	588	1,079
3-31-13.....	514	721	1,235
3-31-14.....	695	803	1,498
3-31-15.....	659	837	1,496
3-31-16.....	636	938	1,574
3-31-17.....	673	1,067	1,740
3-31-18.....	694	1,170	1,864
9 mos. 12-31-18.....	726	1,217	1,943
12-31-19.....	756	1,238	1,994

Q. I presume, judge, the difference betwen the number of wells one year and the next shows the number drilled during that year?

A. Well, it shows the number drilled, and of course, less
1122 the number abandoned, would make the net increase.

Q. That was not my question. The question was the number drilled.

A. Well, then, that statement does not show the number drilled.

Q. That is what I mean. This statement shows the number of wells—the increase in the number of wells each year, but does not take into consideration the number that were abandoned?

A. No, sir.

Q. So that to the difference between the amount of the previous year should be added the number abandoned, to show the number that were drilled during that year?

A. Yes, sir.

Q. Have you any list showing the number actually drilled during each year?

A. No.

Q. Could you prepare such a list?

A. We can.

Q. I would like you to show the number of wells drilled each year.

A. In West Virginia and Pennsylvania?

Q. Well, both, if you have them; both West Virginia and
1123 Pennsylvania. Have you prepared a statement of the mileage of the pipe lines for each year from March, 1911, to the end of 1919, inclusive?

A. Yes, sir.

Q. Will you read that into the record, please?

A. (Reading:)

Mileage of Pipe Lines.

	Penna. miles.	West Va. miles.	Total miles.
Year ending 3–31–11.....	1,968.76	614.68	2,583.44
3–31–12.....	2,006.70	748.42	2,755.12
3–31–13.....	2,060.85	926.71	2,987.56
3–31–14.....	2,294.33	993.64	3,287.97
3–31–15.....	2,304.88	1,059.00	3,363.88
3–31–16.....	2,322.88	1,111.84	3,434.72
3–31–17.....	2,344.91	1,172.61	3,517.52
3–31–18.....	2,373.71	1,234.09	3,607.80
9 mos. 12–31–18.....	2,385.45	1,263.17	3,648.62
Year ending 12–31–19.....	2,408.03	1,287.92	3,695.95

Q. Judge, this only shows the main transmission lines, does it not? Or rather, the transmission and transportation lines. It does not show the gathering lines or the distributing system?

A. It does not show the distributing lines.

1124 Q. Does it show the gathering lines?

A. It shows some part of the gathering lines. We are unable to separate it absolutely.

Q. Without going into great detail, judge, can you tell us the sizes of some of your larger transportation lines?

A. We have three 16-inch lines running from West Virginia fields, and as they approach Pittsburgh they increase to 20-inch and 36-inch lines; and in addition, there is a 10- and 12-inch line from the State of West Virginia to the Pennsylvania state line.

Q. How many lines have you crossing the state line from West Virginia into Pennsylvania, and give us the sizes of those lines, respectively?

A. We have three 16-inch lines, one 12- and one 10.

Q. The sizes of these lines are put down on this map, Pennsylvania Exhibit No. 23?

A. Yes, sir. An examination of the map will show that it is hard to answer your question, because they are all tied into each other, and one or two short lines run over the state line and connect into them in Pennsylvania. It is all tangled up.

Q. This mileage of pipe line which you have given us, beginning in 1911, of course that is cumulative each year and takes in all the lines laid in the previous years?

1125 A. Yes, sir.

Q. And this change here, where you have "9 mos.," I suppose is due to the fact that you changed your accounting system or something at that particular time?

A. The change was made at that time to conform to the rules of the Public Service Commission, which fixes the calendar year as the fiscal year. Before that time, our fiscal years, of all the companies, ended on the 31st of March.

Q. Have you prepared a statement of the quantity of gas sold, beginning in the same way in March, 1911, for the year ending March, 1911, down to December 31, 1919; both in West Virginia and in Pennsylvania and the total?

A. Yes, sir.

Q. Will you please read that into the record?

A. (Reading:)

Gas Sold.

	West Va. Cu. ft.	Penna. Cu. ft.	Total. Cu. ft.
Year ending 3–31–11	2,300,746,000	35,840,726,000	38,141,472,000
3–31–12	2,880,255,000	34,659,575,000	37,539,830,000
3–31–13	2,410,838,000	38,054,144,000	40,464,982,000
3–31–14	2,099,790,000	38,055,195,000	40,154,985,000
3–31–15	1,828,911,000	36,575,950,000	38,404,861,000
3–31–16	2,305,928,000	42,660,206,000	44,966,134,000
3–31–17	2,323,213,000	45,759,489,000	48,082,702,000
3–31–18	3,374,258,000	43,821,743,000	47,196,001,000
9 mos. 12–31–18	2,730,170,000	28,278,705,000	31,008,875,000
Year ending 12–31–19	3,678,154,000	32,328,270,000	36,006,424,000

1126 Mr. Hoffheimer:

Q. That is gas sold by the Philadelphia Company and the other companies?
A. Yes, sir.

Mr. Weil:

Q. To clear that: That is gas sold by the Equitable Gas Company and the Pittsburgh & West Virginia Gas Company?
A. Yes, sir.
Q. And the Monongahela Gas Company?
A. Yes, sir.
Q. Now, have you prepared a statement of the amount of gas purchased each year for the same period, both in West Virginia and in Pennsylvania and the total?
A. Yes, sir.
Q. Will you please read that into the record?
1127 A. (Reading:)

Gas Purchased.

		West Va. Cu. ft.	Penna. Cu. ft.	Total. Cu. ft.
Year ending	3–31–11	2,441,718,000	656,407,000	3,098,125,000
	3–31–12	5,556,579,000	708,347,000	6,264,926,000
	3–31–13	11,243,651,000	579,727,000	11,823,378,000
	3–31–14	11,777,356,000	540,483,000	12,317,839,000
	3–31–15	8,561,388,000	520,345,000	9,081,733,000
	3–31–16	5,131,514,000	731,695,000	5,863,209,000
	3–31–17	6,155,714,000	923,102,000	7,078,816,000
	3–31–18	10,301,041,000	1,061,024,000	11,362,065,000
9 mos.	12–31–18	7,644,648,000	987,418,000	8,632,066,000
Year ending	12–31–19	8,128,324,000	1,657,243,000	9,785,567,000

Q. Have you a statement of the amount of gas produced for the year ending March, 1915, up to December 31, 1919, for each year, in West Virginia and Pennsylvania, and the total?

A. Yes, sir.

Q. Will you read that into the record, please?

1128 A. (Reading:)

Gas Produced.

		West Va. Cu. ft.	Penna. Cu. ft.	Total. Cu. ft.
Year ending	3–31–15	17,690,724,000	11,632,404,000	29,323,128,000
	3–31–16	32,595,425,000	6,507,500,000	39,102,925,000
	3–31–17	31,689,709,000	9,314,177,000	41,003,886,000
	3–31–18	26,253,466,000	9,580,470,000	35,833,936,000
9 mos.	12–31–18	16,197,877,000	6,178,932,000	22,376,809,000
Year ending	12–31–19	18,743,236,000	7,477,621,000	26,220,857,000

Q. Have you prepared a statement of the number of domestic consumers in West Virginia and Pennsylvania for the year ending March 31, 1911, up to the year ending December 31, 1919?

A. Yes, sir.

Q. Showing the number in West Virginia and the number in Pennsylvania, and the average consumption per consumer?

A. Yes, sir.

Q. Will you kindly read that into the record?

1129 A. (Reading:)

Number of Domestic Consumers and Average Consumption.

West Virginia.

Year ending.	No.	Avg. consump.
3-31-11	2,977	147,500 cu. ft.
3-31-12	3,064	157,800 " "
3-31-13	3,288	135,000 " "
3-31-14	3,078	148,600 " "
3-31-15	3,225	130,900 " "
3-31-16	3,348	134,200 " "
3-31-17	3,610	132,900 " "
3-31-18	3,918	147,200 " "
12-31-18-9 mos.	4,021	80,300 " "
12-31-19	4,250	130,400 " "

Pennsylvania.

3-31-11	104,121	134,400 " "
3-31-12	107,936	132,200 " "
3-31-13	113,867	125,000 " "
3-31-14	119,866	128,600 " "
3-31-15	123,675	126,000 " "
3-31-16	129,573	127,100 " "
3-31-17	135,589	136,600 " "
3-31-18	139,358	155,600 " "
12-31-18, 9 mos.	137,764	76,500 " "
12-31-19	144,963	128,100 " "

1130 Q. At the end of the year 1919, on December 31, you had 4,250 consumers in West Virginia, and 144,963 consumers in the State of Pennsylvania, as shown by this statement?

A. Yes, sir.

Mr. Hoffheimer:

Q. Judge Reed, is that average consumption the average per annum?

A. Yes, sir, it is the average per annum.

Mr. Weil:

Q. Have you the list of the cities and towns supplied by your company in the State of Pennsylvania, in Allegheny County, Arm-

strong County, Greene County, Washington County and Westmoreland County; also the cities and towns in the State of West Virginia, supplied; and also the gas supplied from trunk lines to customers whose post office addresses are given?

A. I have.

Q. Will you read that into the record, please?

1131 A. (Reading:)

Cities and Towns in the State of Pennsylvania Supplied.

Allegheny County.

Aiken Station.	Allison Park.	Aspinwall.
Barking Station.	Bellevue.	Birdville.
Boquet.	Bower Hill.	Boyce Station.
Brackenridge.	Braddock.	Bridgeville.
Bruceton.	Carnegie.	Carrick.
Cheswick.	Clinton Terrace.	Coal Valley.
Crafton.	Crafton Heights.	Crafton Terrace.
Creighton.	Dormont.	Duquesne.
East Bellevue.	East McKeesport.	East Pittsburgh.
Edgewood.	Ellisdale.	Elrama.
Emsworth.	Etna.	Ewing Station.
Ewingville.	Fite Station.	Floreffe.
Glendale.	Glassmere.	Glenfield.
Greentree.	Harmarville.	Hawkins.
Hays Borough.	Heidelberg.	Hite.
Hoboken.	Homestead.	Homestead Park.
Homeville.	Hulton.	Ingram.
Knoxville.	Large.	Leasdale.
Lincoln Place.	Lockton Station.	Logans Ferry.
Milltown.	Millvale.	Montrose.

1132

Mt. Lebanon.	Mt. Oliver.	McKeesport.
McKees Rocks.	Munhall.	New England.
New Texas.	North Braddock.	Oakmont.
Option.	Perrysville.	Pitcairn.
Pittsburgh.	Port Perry.	Port Vue.
Rankin.	Redman's Mills.	Rosevale.
Rosslyn.	Ross Station.	St. Clair Boro.
Sandy Creek.	Sharpsburg.	Springdale.
Swissvale.	Tarentum.	Thornburg.
Turtle Creek.	Verona.	Versailles.
Wall.	Walton Station.	West Elizabeth.
West Homestead.	West View.	West Red Raven.
Westwood.	Whitaker.	Wilkinsburg.
Williamsburg.	Willock.	Wilmerding.
Woodville.	Broughton.	Epton.
Fairhaven.	Gill Hall.	Miller's Road.
Rodfield.	Snowden.	Surgeon's Hall.
Spring Garden Boro.		

Armstrong County.

Atwood.
Cochran's Mills.
Freeport.
Neale.
Shay.
Blanket Hill.
Elderton.
Kelly Station.
Rockville.
Stonehouse.
Clinton.
Ford City.
Mossgrove.
Sagamore.
Whitesburg.

1133

Greene County.

Ashtree.
Clarksville.
Dunn Station.
Gump.
Holbrook.
Jollytown.
Nettle Hill.
Pine Bank.
Spraggs.
Woodruff.
Brave.
Deep Valley.
Fordyce.
Harveys.
Hoover's Run.
Kirby.
New Freeport.
Rogersville.
Sycamore.
Brocks.
Delphine.
Garrison.
Hero.
Jefferson.
Ned.
Oak Forest.
Sand Rock.
Waynesburg.

Washington County.

Amity.
Canonsburg.
Coal Centre.
Elrama.
Greenlee Station.
Pleasant View.
Baidland.
Courtney.
Dunkirk.
Finleyville.
Hackett.
Mingo.
Beallsville.
Cecil.
Donora.
Ellsworth.
Khedive.
Scenery Hill.
Centerville.
Charleroi.
East Bethlehem.
Frekerickstown.
Ivanhoe.
Vanceville.
Bentleyville.
Claysville.
Eldora.
Gastonville.
Monongahela.
Speers.
Coal Bluff.
Deemston.
Eighty-four.
Ginger Hill.
Kammeron.
Venetia.

1134

Westmoreland County.

Meadow Brook.
Trafford.
Murrysville.
Vandergrift.
Paranassus.

Cities and Towns in the State of West Virginia Supplied.

Blueville.
Boothsville.
Burton.
Colfax.
Daybrook.
Enterprise.
Fetterman.
Flemington.
Grafton.
Gypsy.
Haywood.
Hutchison.
Lumberport.
Pruntytown.
Rosebud.
Rosemont.
Shinnston.
Thornton.
Worthington.

Gas is also supplied from trunk lines to customers, whose post office addresses are as follows:

Addison.	Freemansburg.	Prospect.
Anthem.	Glover Gap.	Roanoke.
Artisan.	Hundred.	Ross.
Bridgeport.	Jane Lew.	Salem.
Bristol.	Kodal.	Sedalia.
Broomfield.	Littleton.	Simpson.
Brown.	Logansport.	Smithfield.
Camden.	Lost Creek.	Tevebaugh.

1135

Clarksburg.	Mannington.	Uniontown.
Dola.	Metz.	Viropa.
Everson.	Middleton.	Wales.
Fairmont.	Moorsville.	Watson.
Fairview.	Monongah.	Weston.
Farmington.	Pleasant Valley.	West Union.

Mr. Hoffheimer:

Q. Those trunk line consumers, to whom you refer, are in West Virginia, are they not?
A. Yes, sir.

Mr. Weil:

Q. Does your company supply the public buildings and the demands of the municipal subdivisions in various sections in which you supply gas?
A. Yes, sir.
Q. What public buildings are supplied by you in the City of Pittsburgh for the United States Government, Allegheny County, and the city and state?
1136 A. (Reading:)

Public Buildings Supplied.

City of Pittsburgh.

United States Government:
United States Bureau of Standards.
United States Public Health Hospital, No. 39.
United States Marine Hospital.
United States Post Office and 13 Sub-stations.

Allegheny County:
City-County Building.

City:

Public Safety Buildings	2	
City Market Houses	3	
Electric Light Plant (N. S.)	..	
City Play Grounds	10	
City Comfort Stations	4	
City Asphalt Plants	2	
Hospitals	11	(3 City)
Water Pumping Stations	4	
Water Department (Misc.)	23	
Fire Engine Companies	43	
Police Stations	11	
Miscellaneous City Buildings	22	
1137 Lamps for Street Lighting	90	
Public School Buildings	93	

State:

Western State Penitentiary	..	
Charitable Homes	34	

Q. And also give us the supplies for the fire departments, public schools, hospitals, post offices, and water pumping stations of the Cities of McKeesport, Braddock, East Pittsburgh, Carnegie, Homestead, McKees Rocks, Sharpsburg, Crafton, Verona, Tarantum, Chartiers Township, Bridgeville, Scott Township, and Stowe Township, in Pennsylvania?

	Fire departments.	Public schools.	Hospitals.	Post offices.	Water pump stas.
McKeesport	4	15	1	1	2
Braddock	2	8	1	1	1
East Pittsburgh	2	2	..	1	1
Carnegie	2	4	..	1	..
Homestead	2	4	1	1	..
McKees Rocks	4	5	1	1	..
Sharpsburg	9	8	..	2	4
Crafton	2	2	..	1	..
Verona	2	2	..	1	1
Tarentum	4	6	1	2	..
Chartiers Township	1	3	..	..	..
Bridgeville	1	1	..	1	..
Scott Township	1	2	..	..	..
Stowe Township	2	2	..	..	1

1138 Q. Now, judge, can you give us the location of the compressing stations in Pennsylvania and West Virginia, the total hose power capacity, and the displacement capacity every twenty-four hours?

A. I can. (Reading:)

Compressing Stations.

West Virginia.

Name.	No.	Location.	Total H. P. capacity.	Displacement capacity 24 hrs. cu. ft.
Dulaney....	10	Situated on the Dulaney Farm, near Pine Grove, Grant District, Wetzel County.....	3,200	9,220,000
Hundred ...	12	Situated on Company Lot, near Hundred, Church District, Wetzel County.....	1,650	7,310,000
Sedalia.....16		Situated on Company Lot, near Sedalia, McClellan District, Doddridge County....	1,800	3,525,000
Downs 17		Situated on the Brand Farm, Lincoln District, Marion County	4,850	10,740,000
Reed.....	18	Situated on Company Lot, near Weston, Freeman's Creek District, Lewis County.....	3,200	7,160,000
Shirley.....	19	Situated on Company Lot, near Shirley, McElroy District, Tyler County	1,600	3,580,000
Sycamore...	22	Situated on Company Lot, near Lynch Mines, Clark District,		
1139		Harrison County	3,300	7,160,000
Skin Creek .	26	Situated on Company Lot, near Brownsville, Court House District, Lewis County.....	5,100	10,750,000
Mann	28	Situated on the Riffle Farm, Booth's Creek District, Taylor County	120	956,000
Central.....	30	Situated on Company Lot, near Central, Central District, Doddridge County.....	3,300	7,160,000
Burnsville...	31	Situated on Company lot, Burnsville, Salt Lick District, Braxton County.....	3,300	7,160,000
Basnettville .	32	Situated on Columbia S. Lowe Farm, Pawpaw District, Marion County	495	987,000
Big Isaac ...	34	Situated on Company Lot, on E. V. Hudkins Farm, Greenbriar District, Doddridge County	480	1,690,000

Pennsylvania.

Name.	No.	Location.	Total H. P. capacity.	Displacement capacity 24 hrs. cu. ft.
Canonsburg .	2	Situated on Company Lot, Chartiers Township, Washington County	200	4,096,000
Banks Farm.	3	Situated on Company Lot, near Kelly Station, Kittanning Township, Armstrong County	800	9,220,000
Martin Farm	7	Situated on Martin Farm, near Pittsburgh, Ohio Township, Allegheny County.....	50	4,120,000
Pratt Farm..	13	Situated on the Harvey Pratt Farm, near Waynesburg, Franklin Township, Greene County	800	2,665,000
Wise Farm..	14	Situated on the Wise Farm, near Zollarsville, West Bethlehem Township, Washington County	850	2,865,000
1140				
Murrysville .	20	Situated on Company Lot, Murrysville, Franklin Township, Westmoreland County	350	2,900,000
Myers.....	24	Situated on Company Lot, near Bentleyville, Somerset Township, Washington County	350	2,900,000
Local	27	Situated on Esther Rhodes Farm, near Local, Bethel Township, Allegheny County	180	1,590,000
Rogersville .	29	Situated on Company Lot, on Church Farm, near Rogersville, Center Township, Greene County	3,300	7,160,000
Freeport....	33	Situated on the Way Farm, near Freeport, South Buffalo Township, Armstrong County	60	530,000

Q. Judge, I call your attention to the fact that in 1919,—the end of 1919, as shown by the statements you have produced and read into the record, you produced in West Virginia, for the year ending December 31, 1919, 18,743,236,000 cubic feet of gas, and in Pennsylvania, 7,477,621,000 cubic feet; or a little over a quarter of your total production was produced in Pennsylvania. And of your gas purchased, you purchased in West Virginia 8,128,324,-

000 and you purchased in Pennsylvania 1,657,343,000; or you purchased in Pennsylvania, in round numbers, about a little over one-sixth of the gas you purchased in West Virginia. What would be the effect upon the operation of your company if the gas from West Virginia should be shut off or greatly curtailed?

A. Well, naturally it would reduce the operations of the
1141 company to the extent it was cut off or curtailed. It would be impossible to furnish the present consumers from our Pennsylvania supply alone.

Q. What would be the effect of such curtailment occurring on the coldest periods of the year, as to the operation of your company?

A. It would practically put the company out of business, because you wouldn't have enough pressure, I take it, to supply even the few consumers that— Well, to put it differently, you wouldn't have enough pressure to supply everybody, and you wouldn't have enough gas to supply everybody, and you couldn't discriminate between consumers, so that the company would be practically out of business, as far as supplying gas is concerned.

Q. Could you practically continue the operation of your company if, upon the coldest periods of the winter, the gas which you now obtain from West Virginia was diverted to other uses in West Virginia?

Mr. Hoffheimer: That is objected to, as calling for an opinion or conclusion of the witness; as speculative, and as incompetent, irrelevant and immaterial.

1142 The Commissioner: Note the objection and take the answer.

A. You could not practically continue it?

Q. What is the investment of the Philadelphia Company in its natural gas interests in the State of Pennsylvania? You gave us the investment in West Virginia. In round numbers, what would you estimate it?

A. That is very hard to answer, Mr. Weil, without an examination of the records, which I can have made and furnished. We had expended up to April 1, 1915, over $21,000,000 in the extension of lines and drilling wells and things of that sort, no part of which had we charged to capital account, or appeared on our books at all. It was charged right out of either operations or income. Now, that was partly in West Virginia and partly in Pennsylvania. That did not include the payment of rentals, which always have been charged as operating expense. The policy of the company, when we took it over, was to try to make our extensions, our ordinary extensions, and do our well drilling, including the laying of connecting lines, out of earnings. And of course at times that became too heavy, and we could not do it. If we were going to lay
a long line, which would cost a million or a million and a
1143 half dollars, we couldn't do that out of earnings; we would generally borrow the money and either sell stock to meet it or pay it out over a term of years. About 1906, the controlling interest in the company was purchased by what is known as the

United Railways Investment Company of New Jersey; and there was more or less of a difference of opinion between us, a friendly difference, on that subject; and we finally changed our policy to the extent of charging against capital, or to capital,—I don't know which you would say—the laying of lines, including service lines, distribution lines, and the materials that went into the wells; all the labor of drilling and of taking up lines and relaying them was still charged against income. Now, nobody else but the Controller can separate these things and give you the answer you want.

Q. Well, could you give us a rough estimate? Or, if you cannot——

A. I really wouldn't like to do it.

Q. Well, now, can you give us what is your present investment, total investment, in natural gas interests in Pennsylvania?

A. The last balance sheet of the Philadelphia Company attached to the annual report—which is certified to be correct, and
1144 no doubt is—the balance sheet shows for all the companies: that is, the Philadelphia Company, the Equitable Gas Company, the Allegheny Heating Company, the Monongahela Natural Gas Company, the Pittsburgh & West Virginia Gas Company, the Philadelphia Company of West Virginia, and also includes the Philadelphia Oil Company, a total of forty-five million, in round figures, of investment in properties that pertain to the natural gas department.

Q. How much of that was the oil?

A. About $2,000,000, as I remember.

Q. Well, there was about $43,000,000 then——

A. About $43,000,000; yes, sir.

Q. And that was what year, did you say?

A. That was December 31, 1919. In addition to that, of course there has been a very large amount expended in extensions, that does not appear on the balance sheet. It is safe to say, I think it would be a very conservative estimate, to say $60,000,000.

Q. What do you estimate would be the wreckage value of your gas lines, plants, distributing systems, and so forth, in the event of the natural gas supply failing completely?

Mr. Hoffheimer: This is objected to, on the ground stated
1145 in the last objection.

The Commissioner: Note the objection.

A. Well, that is an impossible question to answer, offhand. Of course, the pipes, compressing station machinery, the rigging and other things connected with a gas well, have a junk value; but against that, you would have the cost of taking them out of the ground and moving them from, in some cases, almost impossible locations; so that any statement I would make would be—wouldn't even be an estimate, it would be a guess. But I should say that the investment in West Virginia would be practically wiped out when you got through with it, and to a certain extent, that in Pennsylvania, in the large lines that were laid to connect with the distributing systems.

Q. What about your distributing system in your various towns and cities, and so forth? Would the cost of lifting the same be more than the value of the pipe and stuff would get out?

A. It not only would be that, but it would be a practically impossible situation. Most of the streets in which those lines are laid have been paved, and you couldn't dig up paved streets and take out distributing lines successfully.

Q. Then according to your judgment——

1146 A. I might say the great bulk of the lines in the cities,—the City of Pittsburgh and Allegheny—were laid when the streets were not paved with asphalt, as they are now; but in many cases were not paved at all, and in other cases paved with cobblestones that could be easily lifted and put back. So that the whole situation is changed from the time the lines were laid.

Q. Then if I understand you correctly, according to your opinion, if these distributing systems could not be used for some other purposes, the whole investment, in the event of the termination of the natural gas supply, would be practically lost?

Mr. Hoffheimer: The same objection.

The Commissioner: Note the objection.

A. As to the gathering and transporting systems, yes. As to the distributing systems in the cities, it is possible—I say it is possible, I don't know whether it is practicable to construct plants that would furnish a heating gas, which might be used for some domestic purposes, and in that way use the distributing systems. But that would involve such an expenditure of money that it is practically impossible.

1147 Q. Up to the present time——

A. That is, to do it all. You can furnish some of your customers, where you had the dense—density of traffic, as they say among railroads—a number of consumers bunched together, you might supply them, but you couldn't go all over this territory with manufacturing gas, in my judgment.

Q. The experiments that have been made heretofore in supplying a manufactured gas for heating purposes, have not been practically successful, have they?

A. I think that is correct. I don't know that in any case a company has been able successfully to carry the whole heating load,—house heating and cooking and laundry stoves and things of that sort. I don't know of any case where they do it.

Q. Your company has made some experiments, has it not, in the line of manufacturing gas mixed with natural gas?

A. Yes, sir.

Q. Tell us what you did.

A. Well, we built a producer plant, which was not successful in carrying out the purpose for which it was designed, but was operated in a sort of half-hearted way last winter at the periods

1148 of coldest weather. We are constructing a water gas plant, which I believe is not yet completed—which is not yet completed, and the success of which is more or less problematical. I

would like to say there, Mr. Weil, if you will let me, that from the Philadelphia standpoint, the situation is very critical, in my judgment. With 150,000 domestic consumers, to say nothing of the manufacturing customers, I don't see how the company, with the falling off of gas supply, is going to be able to take care of its business. To build even by-product plants, which I suppose today is the most successful form of furnishing heating gas, involves such a gigantic expenditure. When you come to figure on furnishing 40,000,000 feet of gas a year, it runs into figures I don't understand —as to the cost of the investment. From a by-product oven, you can produce about five or six thousand feet, between five and six thousand feet of gas, to the ton of coal. So I will leave it to your imagination to figure how many tons of coal that would require, and how much investment it would require to produce that, to build those plants. It is an impossible situation, as I see it, and it will require the greatest conservation of natural gas to prolong the present service. When this company went into the gas business,
1149 it was the expressed intention of Mr. Westinghouse, and has been as long as I was with the company, the policy of the company to take care of its domestic trade; treating its manufacturers as a sort of "by-product" or by-consumer, to whom you sold your surplus. Now, we have built up in these communities together with the other natural gas companies, that serve some part of them, a sort of faith and reliance in the natural gas supply and in the furnishing of a heating gas by these companies, over a period of the last twenty-five years, which practically put every householder out of the habit of using coal. The houses are not equipped for it, and it will produce an immense disturbance when the time comes that he has to go back to the use of coal or coke. And of course if you shut off the West Virginia supply, you have brought that condition about that much sooner, and I am rather glad that I am out of the active, responsible management of the Philadelphia Company at the present time.

Q. Judge, has the Philadelphia Company undertaken to obtain additional gas territory? Has it maintained a force for that purpose?

A. Yes, sir, for years.

1150 Q. Has it now available, or does it know of any new gas fields, from which it can obtain a supply of natural gas?

A. I would say no.

Q. The field of the Philadelphia Company now being operated by that company is being fast depleted, is it not?

A. Yes, sir.

Q. Have any estimates been made by the management of your company, as to the length of time, at the present rate of depletion, with the present consumption, that the natural gas supply which you have at present would last?

A. Of course, you have a theoretical situation. You have a long life to your gas fields, in the sense that there is gas there, but you can't get it out. At the present rate of consumption, well, if it lasts ten years I would be very much surprised.

Q. I suppose the amount would be reduced from time to time, during that period of course,—from year to year?

A. Oh, yes; there would be a constant falling off, until you get to the place where it isn't practical; you have got no pressure and you have got no volume,—yet you may have gas theoretically.

Q. About how many stockholders have you in the Philadelphia Company?

1151 A. Well, I haven't looked for some time. Common and preferred stockholders, probably six or seven thousand. The reason it isn't larger than that is that the United Railway Investment Company owns the majority of the stock. It might be more than that. I would like to look at that, if it is important, to give you the correct number.

Q. No, it isn't important. Is the control of your company in any way in any of what are commonly known as the Standard Oil Companies, or any of its affiliations?

A. No, sir. May I explain what the United Railway Investment Company is?

Q. Certainly.

A. One of the branches, operations, of the Philadelphia Company was the ownership of stock of the Pittsburgh Railways. The same people who bought the controlling interest in 1906 owned the control of the stock of the San Francisco Street Railways. They had a company called the United Railway Investment Company, formed under the laws of New Jersey, which owned all of the stock of the San Francisco Railways; and they thought it would be a profitable operation to extend their field into other cities, and they bought the controlling interest in the Philadelphia Company,—common

1152 stock. And it was their intention to go and acquire ownership of railways in other cities, but the San Francisco earthquake so crippled them that they were never able to go farther. While they own the controlling interest in the Philadelphia Company, it is not in any way affiliated with the San Francisco Street Railway System. The two are held through stock ownership and operate entirely independently; and no part of our earnings, except through the ordinary dividend, have gone in any way to help the San Francisco situation. Now, the ownership of the United Railway Investment Company is scattered around in all directions. Ladenberg, Thalmann & Co., who are bankers in New York, represent the controlling interest in the investment company, and that stock is very much scattered and, to my knowledge, no person connected with any of of the Standard Oil interests has any interest, to the best of my knowledge, in any of these companies.

Q. Now, Judge, have you any suggestion to make as to any information you think we ought to have, with reference to this situation? If so, we would be glad to have you make it.

Mr. Hoffheimer: I object to the form of the question.

1153 (Qestion withdrawn.)

Cross-examination.

Mr. Steptoe:

Q. If I correctly understood you, Judge Reed, the gas end of your Philadelphia Company had its inception with the acquisition by George Westinghouse of a franchise in the City of Pittsburgh?

A. Yes, sir.

Q. Do you recall the date of that franchise?

A. It was about the year 1885. Well, it must have been a little before that, because he says they purchased the stock of the Philadelphia Company in 1884. I will say 1884 or 1885 they obtained the ordinance.

Q. And was it before or after that that the control of the Philadelphia Company was acquired?

A. By him?

Q. Yes.

A. Well, he first drilled his wells in probably 1883, or the fall of 1883; and in July, 1884, he acquired the Philadelphia Company. Now, my recollection is that his ordinance was passed before that, from the fact that it was made to George Westinghouse and
1154 his associates and assigns. And then he followed that up by acquiring this charter. There was a good deal of difficulty at that time; two or three men had undertaken to use charters under the General Corporation Law of Pennsylvania applicable to artificial gas, and which at that time gave artificial gas companies exclusive privileges. His problem was to get into the city of Pittsburgh with some kind of a charter, but he couldn't get one under the general incorporation law, so he looked around and found this special charter, as we call it, and purchased it for that purpose, and then went on and laid his lines. Afterwards, the Supreme Court decided that the Artificial Gas Act did not apply to natural gas companies, and then in 1885—you see all this came pretty close together—in the session of 1885, the Legislature enacted what we know as the Natural Gas Act, under which companies could be incorporated, for the purpose of supplying natural gas for fuel and the like, and the use of natural gas was declared a public use, and it was provided that any company that had been formed under the manufactured gas act, could, by going through certain forms, become chartered under this act that I speak of. I can't give you the exact dates of all that, but it all happened there within two years.

Q. And that was followed by the laying of the lines and the acquisition of certain other companies?

1155 A. Yes, sir.

Q. You referred to the Fuel Gas Company, the Carpenter Gas Company and the Equitable Gas Company. When were those companies acquired, and what was their business?

A. The Fuel Gas Company—Will you let me read from his report? That will maybe give you what you want.

Q. Yes.

A. The company began operations on October 9, 1884, on a line

from Tarentum to Hoboken, and a line from Murraysville into the City of Pittsburgh; and in 1885, the company bought the rights and property of the Allegheny Natural Gas Company, which was a company operating on the Allegheny River, on the Pittsburgh side of the Allegheny River, and furnishing gas to the mills in the neighborhood of 33rd Street. And they next purchased the Acme Gas Company, which supplied gas in the neighborhood of Braddock and to the Edgar Thomson Steel Company, as I remember. Then they bought the Carpenter Natural Gas Company, which had been formed by some people in McKeesport, and supplied the National Tube Company and the W. D. Wood mill. In 1885, some time in the summer of 1885, they purchased the Hostetter interests. He had laid lines from Murraysville into Pittsburgh, and he had companies known as the Penn Fuel Company, the Fuel Gas Company and I
1156 think Pew, Emerson & Company, Limited—I think he owned that. And he sold all those to the Philadelphia Company. Some time later than that, they bought the companies that were being promoted by H. Sellers McKee. I have forgotten the names of them, and I don't know the date. They were not very large. The Equitable Gas Company was purchased by us after we acquired the company. It had been operating for a good while, under a contract with the Philadelphia Company to supply gas. I can possibly give you the date of that later.

Q. Were the companies you have mentioned all companies engaged in the production and supply of natural gas?

A. Yes, sir.

Q. With the Equitable Gas Company always engaged in the natural gas business?

A. Yes, sir.

Q. If I correctly understood you, there was no authority prior to 1885, for the public service of natural gas in the cities and towns of Pennsylvania—for the incorporation of companies for that purpose?

A. That is correct.

Q. And there was no natural gas served by any such companies within the limits of the City of Pittsburgh prior to that date?

A. Prior to 1885?

1157 Q. Yes.

A. Oh, there was before that. There was gas served here prior to 1885, by companies who were acting under color of title, so to speak.

Q. But not incorporated?

A. They were incorporated under the Manufactured Gas Act. It took some two or three years for them to find out they could not do it. I don't think there was any gas supplied prior to 1880.

Q. You refer now to natural gas, do you?

A. Yes, sir, natural gas.

Q. Were there local distributing companies acquired by the Philadelphia Company in the City of Pittsburgh?

A. You mean, originally? At any time during its history?

Q. Along about the time of the franchise or soon after.

A. Yes, sir; they very soon acquired the controlling interest in

the stock of the Allegheny Heating Company, which was entirely a distributing Company in the City of Allegheny. I might add to that, the Low Pressure Gas Company, supplying consumers in the Boroughs of Homestead and McKees Rocks; the Union Gas Company, of McKeesport, was partly furnishing its own gas, but mainly buying it, so that it was partly a distributing company. That was acquired some time in 1900.

1158 Q. The map you have here filed as Pennsylvania Exhibit No. 23 has the legend that it is a map of the natural gas property of the Philadelphia Company in Pennsylvania and West Virginia. As a matter of fact, this map shows as a whole the several and separate holdings of the Pittsburgh and West Virginia Gas Company, and of the Equitable Gas Company, does it not?

A. And of the Monongahela Gas Company.

Q. The connection of the Philadelphia Company consists in its ownership of the capital stock of the companies you have mentioned?

A. Yes, sir; so far as West Virginia is concerned.

Q. It is a holding company?

A. It is partly a holding and partly an owning company. It owns lines and wells in the State of Pennsylvania, it owns compressing stations in Pennsylvania, and it is a holding company of the stocks of companies in West Virginia.

Q. The West Virginia companies are at present the Pittsburgh & West Virginia Gas Company, handling the gas end, and the Philadelphia Oil Company, owning the oil?

A. Well, there is still another company there, the Philadelphia Company of West Virginia, which was the original investment of the Philadelphia Company. It owns territory and lines. Let

1159 me go back to that again, to get it straight. The Philadelphia Company of West Virginia was formed somewhere about 1896, to take over gas holdings and to lay lines in West Virginia; was supplied with money by the Philadelphia Company for that purpose ,and acquired quite a lot of territory and lines. The Pittsburgh & West Virginia is the old Fairmont & Grafton Gas Company, which had been acquired by the Philadelphia Company somewhere about 1905 or 1906, I think. We changed the name of the Fairmont & Grafton to the Pittsburgh & West Virginia Gas Company, leased to it all of the property of the Philadelphia Company of West Virginia, and made it the operating company in West Virginia.

Q. So that, boiled down, the Philadelphia Company of West Virginia is the lessor of properties it owns and the Pittsburgh & West Virginia Gas Company is the lessee and operating company?

A. Yes, sir.

Q. And the Philadelphia Oil Company represents the oil interests?

A. Yes, sir.

Q. And are all three of those West Virginia corporations?

A. I can't tell you offhand about the oil company, but I think they are. Two of them are; the gas companies are West Virginia corporations, and my impression is the oil company is.

1160 Q. When was the Fairmont & Grafton Gas Company incorporated?

A. I don't know, sir. It was in existence when we purchased it.
Q. It was a domestic West Virginia corporation?
A. Yes, sir.
Q. Do you know what towns it supplied?
A. Most of Grafton and some small line into Fairmont and small towns adjoining.
Q. Are you able to tell us what gas territory and pipe lines the Fairmont & Grafton Company had at the time of the acquisition of its stock by the Philadelphia Company interests?
A. Well, I guess, to avoid delay, I can say that I cannot, but will furnish it if you desire.
Q. If you can ascertain that during the noon hour, judge, I wish you would do that.
A. Yes, sir.
Q. Do you know whether the Fairmont & Grafton Gas Company, under its present changed name of Pittsburgh & West Virginia Gas Company, yet owns and holds the property it held at the time the Philadelphia interests acquired control?
A. My impression is that it does, except so far as the territory has been exhausted and leases surrendered.

Q. That territory and property was not transferred to the
1161 Philadelphia Company of West Virginia, was it, or any of it, Judge Reed?
A. I don't think so. There was no intention to transfer it.
Q. You may answer from the data you have in your possession now.
A. I find that at the time the Fairmont & Grafton Gas Company was taken over, it had 24 gas wells, and it owned leases amounting to 18,617 acres.
Q. Does your memoranda show where that territory is located?
A. It does not.
Q. And where the gas was being sold?
A. That I will have to get for you.
Q. Now, just what date was that, when the stock of the Fairmont & Grafton Company was purchased? The exact date, if you are able to give it.
A. Well, it was bought between the 31st of March, 1905, and the 31st of March, 1906.
Q. What other local natural gas companies in West Virginia were acquired by the Philadelphia Company of West Virginia, or by the Pittsburgh & West Virginia Gas Company—the latter under its original name or changed name?
A. Well, if you go back to the year 1895, they acquired those two companies that I spoke of, the Devonian and Victor Oil Companies. Other than that I don't remember any companies they acquired in West Virginia.

Q. Do you recall that the Fairmont & Grafton Gas Com-
1162 pany, along in September of 1906, purchased a considerable body of gas territory, wells, pipe lines and accompanying equipment, from one M. A. McMullin, who in turn had a few days

prior thereto purchased it from the Home Gas Company, a local utility serving Mannington, West Virginia, and other communities?

A. I remember such a transaction, but I can't give you the details of it at this date.

Q. Could you, in the same way you suggested awhile ago, advise us of that this afternoon?

A. I will take a memorandum of that.

Q. In the statement you have given us of the gas sold for the years 1910 to date, you have not separated the sales of the Pittsburgh & West Virginia Gas Company from those of the Equitable Gas Company, have you?

A. Wasn't that separated between West Virginia and Pennsylvania?

Mr. Weil: Yes, you will find that is separated.

Mr. Steptoe:

Q. Do I understand that the figures given for West Vir-
1163 ginia would be the figures for the Pittsburgh & West Virginia Gas Company?

A. Yes, sir, that would be bought through the Pittsburgh & West Virginia Gas Company.

Q. And the Equitable Gas Company does no business in West Virginia at all?

A. No, sir.

Q. Of the gas sold in Pennsylvania, by the Equitable Gas Company, are you able to give us the amounts sold for domestic purposes and the amounts sold for industrial purposes?

A. In West Virginia?

Q. In Pennsylvania. I am speaking of the Equitable Gas Company.

A. We have that month by month. What period do you want?

Q. We would like for you to cover the same period covered by the statements which you have already filed, namely, 1910 to date.

A. That is, sold to the domestic consumers and gas sold to industrial consumers of Pennsylvania by the Equitable Gas Company?

Q. Yes. I would like the same figures for the Pittsburgh & West Virginia Gas Company in West Virginia.

A. Yes, sir.

1164 Q. Will you give us the same figures for the Monongahela Natural Gas Company?

A. Yes, sir. Now, I will have to qualify that. We can only go back to the time that we acquired the Monongahela, because they didn't keep their books as we do. I have forgotten what that date was—somewhere along in 1912 or 1913.

Q. Is the Equitable Company the only company that supplies gas to the Allegheny Heat & Light Company?

A. The Allegheny Heating Company?

Q. The Allegheny Heating Company.

A. Yes, sir.

Q. Then the latter company is purely a distributing company?

A. Yes, sir.

Q. Will the figures which we have asked for cover the amount of industrial gas and the amount of domestic gas that is supplied to that distributing system?

A. Yes, sir.

Here a recess was taken until 1:30 o'clock, P. M.

1165 Afternoon Session.

And now, the hour of 1:30 P. M. having arrived, hearing resumed, pursuant to adjournment.

JAMES H. REED resumed the stand and Cross-examination continued by Mr. Steptoe:

Q. Judge Reed, in the numerous statements which you have read into the record on direct examination, there was no separation, was there, of the business done by the several constituent or subsidiary companies?

A. No, sir.

Q. In order that we may get the record straight, I will ask you if, in the statement of the gas sold it is not a fact that all gas sold in West Virginia was by the Pittsburgh and West Virginia Gas Company and all that in the State of Pennsylvania was by the Equitable Gas Company and the Monongahela Natural Gas Company or other Pennsylvania subsidiaries?

A. Yes, that is correct.

Q. And with regard to the gas purchased, the Pittsburgh and West Virginia Gas Company was the purchaser of all of the gas bought in the State of West Virginia?

1166 A. That is right.

Q. And the purchases in Pennsylvania were by the Equitable Gas Company and the Monongahela Natural Gas Company?

A. That is correct.

Q. With reference to the mileage of pipe lines, the pipe lines in West Virginia are either owned by the Pittsburgh and West Virginia Gas Company or owned by the Philadelphia Company of West Virginia and leased to and operated by the Pittsburgh and West Virginia Gas Company?

A. Yes, sir.

Q. Did those pipe lines stop at the State line insofar as concerns the ownership and operation by the Pittsburgh and West Virginia Gas Company?

A. Yes, substantially at the State line. They may have gone over a few hundred feet but that was the intention.

Q. With regard to these pipe lines, what sizes of lines are included in your statements—the minimum sizes?

A. That answer I will have to supply later.

Q. The gas wells on your statement assigned to West Virginia are the gas wells of the Pittsburgh and West Virginia Gas Com-

pany, either owned by it or operated by it under a lease from
1167 the Philadelphia Company of West Virginia?

A. That is substantially correct.

Q. The operated and unoperated territory of West Virginia is owned by the Pittsburgh and West Virginia Gas Company or operated by it under lease from the Philadelphia Company of West Virginia?

A. Yes.

Q. The gas produced in the state of West Virginia was produced by the two West Virginia companies that we have mentioned, namely, the Pittsburgh and West Virginia Gas Company and the Philadelphia Company of West Virginia?

A. Yes, sir.

Q. On your statement of cities and towns in the State of West Virginia, served, what company or companies furnished that service?

A. Pittsburgh and West Virginia Gas Company entirely, I think.

Q. And the statement as to the number of domestic consumers and average consumption assigned to West Virginia relates solely to the Pittsburgh and West Virginia Gas Company?

A. Yes, sir.

1168 Q. All the compressing stations in West Virginia belong to the Pittsburgh and West Virginia Gas Company either outright or under lease from the Philadelphia Company of West Virginia?

A. Yes.

Q. As a matter of fact, the Pittsburgh and West Virginia Gas Company and the Philadelphia Company of West Virginia own no property and transact no business outside of the State of West Virginia?

A. That is right.

Q. Of the several lines meeting at the State line between Pennsylvania and West Virginia, which of those in the State of Pennsylvania are owned and operated by the Equitable Gas Company and which are owned or operated by the Monongahela Natural Gas Company?

A. It is hard to tell from the map. The Monongahela Company has one line which I think is a twelve inch line—ten or twelve inch line. They are all so close together and interlaced that it is pretty hard to tell which is which; but they had one line that ran down toward the State line and that line was extended after it was acquired by the Philadelphia Company and worked into one of the West Virginia lines.

1169 Q. The gas taken through that line owned by the Monongahela Natural Gas Company is purchased by that company or by the Equitable Company at the State line?

A. I think it is all purchased by the Equitable.

Q. Still referring to this line of the Monongahela Natural Gas Company, where is the gas taken through that line served?

A. Well, it was originally served at the time of the purchase and for some little while afterwards to the Oliver mills and some

surrounding properties. Today my impression is that it goes into the general system. So far as there is any, it goes into the Equitable system.

Q. Where are the Oliver mills you refer to?

A. On the South Side of the city of Pittsburgh, just a short distance above the Panhandle Railroad Bridge—perhaps six or eight squares above.

Q. Up until the last few years, the gas supplied through that line went almost entirely to the industrial use; did it not?

A. When the Monongahela was owned separately, yes.

Q. That was as late as 1917, was it not?

A. I don't think it went that far. There were some
1170 contracts with the Oliver people that we felt we had to carry out, but I don't think it went as late as 1917. It was for several years after the purchase. Of course, that might be qualified by the fact that there was more gas sent through the Monongahela pipes after its purchase during periods of cold weather and during the great industrial activity, when every line was in use. There was more gas sent through that line than the Monongahela's wells could supply, but I think to that extent it was delivered to the other people than the Olivers.

Q. To refresh your recollection somewhat in the form of a leading question, is it not correct that up until the year 1917, at least, all of the gas that went through that line to the Monongahela Natural Gas Company was supplied to the Oliver Iron and Steel Company, A. M. Byers & Company, Republic Steel Company, Dilworth, Porter & Company and a few similar industrial consumers?

A. That might be, Mr. Steptoe. I don't think they were all customers of the Monongahela, though. Some of them were customers of the Philadelphia Company or the Equitable. They were served through that line.

1171 Q. But the gas that went through that line was practically confined to industrial service?

A. That may be. I couldn't answer that definitely.

Q. Was that true all the year round?

A. I don't know.

Q. What is the character of the industrial consumers who are supplied either by the Equitable Company or the Monongahela Natural Gas Company now, and during the years past, in a general way?

A. Well, they are of all kinds; steel plants for certain heating furnaces and during the earlier days they sold gas to those plants for boiler use but that was discontinued some years ago, largely on account of the price. They couldn't burn it against coal. It was used in a great many small manufactories, both for industrial purposes and for heating their plants. It is used by glass companies. I don't know that I can give you the list; it is almost every industry in the city of Pittsburgh.

Q. Including quite a number in the vicinity?

A. In the vicinity, yes.

Q. Has your Company among its industrial consumers any plants

which are, by reason of their character, obliged to have a certain amount of service of natural gas at all times?

A. Only small consumers.

1172 Q. For example?

A. Small consumers in the iron and steel business that make fine goods, where they use comparatively small fires. The glass companies have to have continuous service. I don't know of anything else. The large iron and steel plants we always reserved the right to shut off or shut down on them when domestic requirements were involved.

Q. Are those deliveries to the Equitable Gas Company at the State line made pursuant to any contract or agreement between the Equitable Company and the Pittsburgh and West Virginia Gas Company?

A. In my time, no fixed agreement—no formal agreement. The gas was taken and paid for in an accounting between the companies at varying rates—enough to enable the Pittsburgh and West Virginia to maintain itself and continue its improvements,—maintain its service.

Q. Was not there a contract in writing, at least one, in existence in the year 1917?

A. I rather think you are right. There was a contract made in 1917—not a very formal one, perhaps—not so formal as if we had been dealing with strangers.

Q. Was that contract in writing and executed by the two companies?

A. If there is one—yes, sir.

Q. Is it still in existence and are all of the deliveries made at the State line by the Pittsburgh and West Virginia Gas Company

1173 to the Equitable Gas Company made pursuant to that contract and its terms and conditions?

A. Yes, sir.

Q. Was not there, on or about the year 1917 or 18, a modification of that contract, also in writing?

A. If it was made in 1917, I don't think there was. My recollection is that we had no formal contract prior to that time, and we paid the Pittsburgh and West Virginia Gas Company an amount which by a sort of common agreement between the controller and the general manager and myself sometimes we agreed would keep that Company in funds to enable it to carry itself on and do its drilling and all that sort of thing. Since you have suggested it, I think there was a contract made—I am pretty sure there was a contract made about 1917, but I don't know of any modification of it.

Q. Will you be good enough, Mr. Reed, to produce for us the contract referred to between the Equitable Gas Company and

1174 the Pittsburgh and West Virginia Gas Company, together with any modifications thereof that may exist?

A. Yes, sir, we will do so.

Q. You assigned an investment valuation of something like $43,000,000 in the gas industries or investments of the Philadelphia Company?

A. Yes, sir.

Q. That valuation included all of its gas holdings in all its various subsidiaries or companies controlled by it, both in the State of Pennsylvania and in the State of West Virginia?

A. It was a combined balance sheet, showing the investments of all the companies in both states, so far as the subjects stated under "Property and Plant" showed it. There was no valuation put on leases and a very large amount of the work that had been done, as I explained this morning, never was put on the balance sheet to the extent that it includes all the companies.

Q. What was or is the valuation assigned to the properties of the Pittsburgh and West Virginia Gas Company?

A. That I will have to get for you.

Q. You do have a separate valuation on capital investment for that particular company, do you not?

A. That can be ascertained; yes, sir.

Q. And the same is true with reference to the Philadel-
1175 phia Company of West Virginia.

A. Yes, sir.

Q. And also true of the Philadelphia Oil Company, the Equitable Gas Company and the Allegheny Heating Company?

A. Yes, sir.

Q. I direct your attention, Mr. Reed, to Pennsylvania Exhibit No. 23, being a map of the transmission lines and some gathering lines of the systems, both of the Pittsburgh and West Virginia Gas Company and the other associated companies?

A. Yes, sir.

Q. Let me ask you what cities or communities are served in the State of West Virginia by the Pittsburgh and West Virginia Gas Company, along the line commencing on the East at Thornton and thence running Westwardly to a point in Harrison County near Enterprise? Are the towns and villages served by your company shown on this map?

A. They are, as far as I know; yes, sir.

Q. And does your company serve consumers, domestic and industrial, along the line or lines running Northeastwardly from the extreme southerly portion of the line?

1176 A. Down in Gilmer County?

Q. Yes.

A. There seem to be no towns, unless that list shows some which I can identify. They serve, as I understand it, farmers and domestic consumers along the line.

Q. How are the connections made for service along the lines, to the transmission lines or the gathering lines?

A. Both, as the parties may be.

Q. The list of towns, cities and villages in West Virginia, which you gave on direct testimony, are located at various points along the routes of your several lines in the State of West Virginia, are they not?

A. Yes, sir.

Q. As a matter of fact, the Pittsburgh and West Virginia Gas

Company is now, and has been for many years past, serving the public of the State of West Virginia, domestic and in some cases, industrial gas?

A. That is correct.

Q. It does file and has filed its report through the Board of Public Works of the State of West Virginia as a public utility in the natural gas business?

A. Yes, sir.

Q. And the rates charged and the prices the company receives in the state of West Virginia, are and have been, for some years
1177 past, fixed by the Public Service Commission of the State of West Virginia?

A. Yes, sir.

Q. Have any applications for increasing rates for domestic and industrial service in the state of West Virginia been made and received by the Pittsburgh and West Virginia Gas Company?

Mr. Weil: Within what time?

Mr. Steptoe: The question is general.

A. I think so, yes, sir. We had a case there that seems to be a rate case—No. 458, an application to increase rates. That was in 1917—I think it must have been 1917. This shows the accrued earnings up to March 31st, 1916.

Mr. Steptoe:

Q. The increased rates applied for were granted on the occasion you refer to, in the year 1917?

A. That is my recollection.

Q. Can you recall some of the principal franchises the Pittsburgh and West Virginia Gas Company holds, either direct or as an operating company of the properties of the Philadelphia Com-
1178 pany in the State of West Virginia?

A. I cannot at the present time. I can get it.

Q. There are a number of those franchises?

A. There are.

Q. Some of them were granted by the cities or towns themselves and others by the county courts where they are not incorporated,—or are you informed on that?

A. If you say so, I will say yes. I am not familiar with that.

Q. These principal transmission lines of your company shown on the map go across the public roads of the State of West Virginia in many instances, and in some instances, along the roads?

A. Yes, sir.

Q. Are those rights exercised under permission or authority granted by the proper state and county authorities in the State of West Virginia?

A. Well, I assume so. I never heard of anything to the contrary. They are there and are being operated.

Q. As a matter of fact, a considerable proportion, especially of your larger transmission lines, or the rights of way for the laying

of the same, were acquired by condemnation proceedings in
1179 the State of West Virginia, were they not?

A. Some of them. I don't know that any considerable amount were. My recollection was that they went down there and paid merely whatever they had to, to get them. Of course, I have no doubt they had condemnation cases.

Q. Where they were unable to agree, they surveyed a route through a particular farm, by condemnation?

A. Yes, sir.

Q. Has the Philadelphia Company of West Virginia or the Pittsburgh and West Virginia Gas Company ever transported any natural gas other than that owned by them?

A. Owned or purchased by them, you mean?

Q. Yes.

A. I don't think so.

Q. Only such gas as they owned by production or purchase?

A. I think that is correct.

Q. Have either of those companies ever professed or held themselves out as willing to transport the gas of other parties?

A. I don't think they have; we didn't consider that practicable.

Q. Have either of them professed to be common carriers
1180 at any time?

A. Not any more than any other gas company that carries its products. If you mean common carriers in the railroad sense of carrying other people's property, no.

Q. Well, if I understand you correctly, neither of these companies does or ever has carried gas belonging to other people?

A. Why, there might be specific cases where it was convenient to take some gas from some company and deliver it an equivalent at some other point as a matter of convenience. That would be practically buying the gas at one point and delivering other gas at another point, but as to carrying other people's gas and delivering that specific gas or its equivalent, no.

Q. Could you tell us where such examples of exchanges of gas or buying at one point and selling it at another occurred?

A. I can't tell you offhand, but there has been a practical give and take among the companies for purposes of convenience.

Q. That is done among all large companies?

A. Yes, and there are some cases where it has occurred.

1181 Q. Going back one moment to the matter of the investment of the Pittsburgh and West Virginia Gas Company, it is true, notwithstanding the relations between that company and the other subsidiaries, that a separate valuation and capitalization and investment valuation has been and is assigned to the properties of the Pittsburgh and West Virginia Gas Company in West Virginia not only for taxation purposes, but for the fixing of rates for gas?

A. For all company purposes.

Q. And the management of the Pittsburgh and West Virginia Gas Company is, to a very large extent, conducted from its offices in the City of Clarksburg, West Virginia, is it not?

A. The local management, yes.

Q. That is your field superintendence?
A. Yes. The administrative management and the general management is from the Pittsburgh office.
Q. Did I understand that the company's territory in the State of Pennsylvania is owned and operated by the Equitable Gas Company?
A. Operated by it under a lease. It has some small holdings of its own, but the bulk—practically all of that territory and the lines are owned by the Philadelphia Company.
1182 Q. The Philadelphia Company is the original Philadelphia Company?
A. Yes.
Q. The Philadelphia corporation?
A. Yes.
Q. What was the first field they acquired?
A. The Philadelphia Company?
Q. Yes.
A. Well, it started, as I said this morning, with George Westinghouse's well in Homewood.
Q. That was about the year 1884 or 1885?
A. Yes.

Mr. Weil:

Q. That well was in his back yard?
A. Yes, it was near his greenhouse, and nobody slept in the neighborhood for weeks.

Mr. Steptoe:

Q. I refer more especially to the company's territory you mentioned as lying in the counties of Armstrong and Westmoreland.
A. According to their first report, their territory seems to have been in the Murrysville field and in the Armstrong field,
1183 and they went off to the east of the city.
Q. Those are in what counties of Pennsylvania?
A. Well, Armstrong field is in Armstrong County mainly and Murrysville is in Westmoreland County. Then they went to the Grapeville field, practically where the town of Jeannette is, this side of Greensburg.
Q. Can you give the approximate date or dates of going to the Grapeville field?
A. I can; they had a well in Grapeville December 26th, 1887, so they must have been in there by that time.
Q. It what county is the Grapeville field?
A. Westmoreland County.
Q. Can you give us, in a general way, the successive territories or field entered by your Company and about the time?
A. Well, between '85 and '87, they were in the Murrysville field, what I call the Armstrong field. I have forgotten the name of it. They were in the Grapeville field and through other parts of Pennsylvania,—in the field around Canonsburg, Washington County.

Q. For what years?

A. Those wells were completed between 1886 and 1887—in those two years. They were at a place called Lyons Run, which
1184 is southeast of McKeesport a little ways—went in there in 1885 or 1886. I think they got that through the Carpenter Gas Company. Through the Chartiers Gas Company, they were in the Hickory field, in which the wells were drilled between February and October, 1887. The Hickory field, I think is in Washington County; I am not sure. In 1888, they seemed to have leased lands in the neighborhood of Belle Vernon.

Q. In what county?

A. Belle Vernon is in Fayette County. Mr. Westinghouse said they struck one of the most violent wells in the district in the Belle Vernon territory.

Q. When did your company acquire an entry into the development of the fields in Greene and Fayette Counties, Pennsylvania?

A. Well, they seem to have had leases in 1894 in Greene County and in Wetzel County, West Virginia, so they must have been begun acquiring leases before that time.

Q. I understood you to testify it was shortly after that when a line was run down to Big Moses well?

A. Yes, sir.

Q. And the territory of the counties of Monongalia, Marion, Harrison, Lewis and Gilmer were acquired along, through what years, successively?

1185 A. I don't know when they went into Monongalia County. I can't find any record of it.

Q. Did they go into Marion County and have holdings there prior to the purchase of the Fairmont and Grafton Company?

A. I rather think so, yes. I find here, Mr. Steptoe, in the report of March 31st, 1901, which would cover the year from March 31st, 1900, a statement to the effect that the company had acquired 30,693 acres of leases of productive gas territory in Lewis and Gilmer Counties. Those were acquired as early as 1901. It is pretty hard to tell you, without reference to the records of the Company. They were leasing up and down all over that country as fast as they could.

Q. I understood you to refer this morning to the insufficient supply and developing at an early date. When did that insufficiency of supply begin to manifest itself?

A. As far back as 1891, he began to talk about the necessity of extending a line southward, and in 1892 he began to talk about the necessity of a fuel gas plant. He thought he could get a dollar or ninety cents a thousand for cooking purposes, and so on. The next year, he said the developments in the various gas territories indicates as good a supply in the next few years as in the past; however, the company had now accumulated a cash fund for the
1186 purpose of manufacturing gas when the necessity arises. In 1894, he stated he had bought Brunot Island for the purpose of erecting a plant. I think the answer to you perhaps is that he had a sufficient supply of gas for the business that he had, but his business increased so fast that he had to go further south to get

more gas. In other words, he had enough gas to take care of the five or six thousand consumers that he had in the first five or six year, but when they got up to fifteen or sixteen thousand, he didn't; he had to reach further out. There were the good days when they used to blow the gas off on Sundays to get rid of it.

Q. You are referring rather frequently to "he," and are consulting a book. Will you clear your testimony by stating to whom you refer and what is that book?

A. George Westinghouse, President of the Philadelphia Company, and what I have read from here are his annual reports to the stockholders.

Q. Was the insufficient supply of the fields being used from year to year accompanied with any depletion or going down of supply?

A. I can't answer that, except as I have done; that the increased business required him to go further for the gas. He said in his report of May 1, 1896, "The discovery of natural gas in large
1187 quantities in Greene County, in this state, and in Wetzel and Tyler Counties, made it advantageous for the company to spend the money to continue the supply of natural gas, and will thereby defer the erection of a fuel gas plant."

Q. Do you or do you not know of any depletion or decrease in the volume of gas produced in the earlier discovered and earlier operated fields, and if so, when that decrease commenced to make itself manifest?

A. I can't answer that from recollection. I know that the Philadelphia Company at one time—their supply ran down until it was very difficult to get a supply—that was somewhere during 1890 that the supply during the winter was short, and they raised money by a series of long-time serial notes—raised enough money to build a line to West Virginia. I don't know what year that was, but I know it was considered a necessity. It might have been later than that.

Q. I understand you to mean that the tendency of the gas wells to fall off in production became manifest as far back as 1890?

A. I didn't intend to go back that far. I think about 1894 or 1895, or somewhere along there.

Q. There was a falling off in the well production apparent
1188 at that time, was there?

A. Yes, sir. I find in the report of 1894 they say: "The wells drilled during the past year have had a smaller capacity than those formerly drilled, so that nearly as many wells have been required for the past year's service, notwithstanding there has been some decrease in the gas supplied." In 1897, they had raised the money and built a line into West Virginia, a distance of 150 miles, which has been justified by the results, and which he says will defer the erection of a fuel gas plant.

Q. Did this decrease in the individual wells which you have referred to, extend to the fields generally that were first operated, or the oldest operated?

A. I think they did.

Q. There was a constant decrease both in volume and in the field

production which first manifested itself as early as 1894, in the State of Pennsylvania?

A. Yes, if not sooner.

Q. And as a result of that, your company gradually extended its own acquisition of other fields and other territory?

A. Yes, sir.

Q. Would it be correct to say, as a general statement, that the acquisition of new territory and the development of additional territory has been southward in point of time?

1189 A. That is correct. Of course, you know they would go back into the older fields and occasionally get a good well and bring up the production for awhile, but in a general way the development was southward.

Q. When did the shortage in supply first become manifest? I mean now to refer to the inability which you mentioned to supply the consumers.

A. Well, I am speaking of something now I have not thought of for years. In a general way, I judge about 1894 or '5. The Murrysville field I think was pretty nearly exhausted, and the Grapeville field went down pretty fast. I think that was about the time.

Q. And as the successively acquired fields tended to exhaustion, you were compelled to push further afield and further south for additional supply?

A. Yes, sir.

Q. Did I understand you to say that during the time you were president of the company, your company was unable to take care of its domestic consumers in the cold weather?

A. No, I wouldn't say that happened until 1916.

Q. There was a shortage in that year?

A. There was a lack of pressure; no definite shortage, but there was a lack of pressure that in some cases resulted in what the user of the gas called a shortage. It was rather pronounced at the

1190 ends of the lines. It was bad in Allegheny City. Sometimes that was due to small service lines and small street lines that had been laid, as part of the older plant, but the cause of that, I think, was the very large continuous requirements by the manufacturing plants during the pre-war excitement, when everybody was running night and day, when the wells had no chance to rest up, and we went into a very cold winter following,—everything combined.

Q. Did you experience a shortage in the years succeeding 1916?

A. Well, the 1917 and 1918 winter, it was pretty cold, and that winter it kept us right busy to keep them warm—keep up the supply; but 1918 was not a bad winter.

Q. What was it in 1919?

A. 1919 we had, I think, a moderate supply in very cold weather. I wouldn't say there was a shortage.

Q. Have you observed a decrease in your supply each year?

A. Yes, I would say so.

Q. An increasing difficulty in taking care of your consumers?

A. Yes, sir; the wells were coming in smaller and it takes more of them to supply the consumers. The supply is decreasing.

Q. From your past experience, do you anticipate that that
1191 shortage or decrease in supply—whichever you choose to term it—will continue?

A. I would think so.

Q. In other words, there is a limit to the amount of gas and that amount is continually decreasing. Isn't that about the sum and substance of it?

A. I wouldn't like to swear to that exactly. We might find some new fields in West Virginia or Greene County that would help out this field considerably. Nobody knows, I guess. We might strike a lower sand; but I suppose in a general way, what you say is correct. The limited supply and the indefinite demand are going to exhaust it. The natural growth of cities will increase it. Taking on three or four thousand additional houses in Pittsburgh, you are going to have an increased demand.

Q. And that demand or increased call upon you is increasing in Pennsylvania as well as West Virginia?

A. Yes, sir.

Q. I understood you to state this morning that your company kept a staff of men for the purpose of investigating possible new fields for gas supply, and you have no new field in prospect at the present time?

A. I think that is correct—no large field.

Q. You referred on direct examination to the impossibility
1192 or impracticability of apportioning the gas among the consumers, where there was not enough to go around?

A. I still think that is right. You can't satisfy a man by giving him 50 per cent of his requirements. His wife can't cook with it, and his house is cold. He either wants all or nothing.

Q. The fact is, that to properly supply a thousand consumers is better than to improperly supply 2,000; is that the fact?

A. That is the fact; yes, sir.

Q. Did I understand you to advocate or approve the suggestion of conservation by limiting the supply of gas for domestic purposes to cooking and hot water heating?

A. You didn't understand me to say that. I don't know what you ought to do. It may get to that.

Q. If the domestic supply from time to time becomes and is insufficient, why does your company continue the furnishing of gas for industrial purposes?

A. Well, there are two or three reasons for that. Through the summer months, when the domestic demand is low, you supply them because you need the money, and probably, in many cases, if you don't do it, your competitors will take it out and supply it to somebody else. That is the main reason, I guess. Besides, you can't well refuse them. It is a public use, and you can't well
1193 refuse to supply a man in the summer time if you have the gas. I think you have a right in the winter time to shut off your manufacturer and take care of the domestic supply; but in the

summertime I don't see how you can refuse to supply them, if they are willing to pay the price.

Q. Do you mean to say that if the company has the gas it is legally bound to serve that gas to domestic or to industrial, or to both, depending upon whether it has the supply?

A. If it has enough supply for both, it is bound to supply them both. If it has not, then under its tariff it has the right to cramp down the manufacturer and give it to the domestic consumer, and he takes it on that understanding; but if it has plenty of gas in the summer time and the consumer demands it, I think they are bound to give it to him and let next winter take care of itself.

Q. As a matter of fact, the gas companies generally sell that industrial gas, when they have a surplus supply, because it is one of the remunerative ends of the business?

A. Well, of course, they are in business to make some money, if they can, but it is remunerative in those months when the domestic demand is low.

Q. Isn't it a fact that if no industrial gas were sold, the domestic consumer could not be supplied at the present rate?

1194 A. That is undoubtedly right, because a portion of your overhead and a portion of your drilling and expense of that sort are taken care of by the sales to manufacturers.

Q. On direct examination, Judge Reed, you referred to the effect upon the operating or distributing end of your company, if a portion of its supply was taken off or diverted to other uses or to other points. Let me ask you how large a supply diverted from the State of Pennsylvania would affect your company or make it difficult or impossible to serve your consumers adequately?

A. I can't answer that question satisfactorily. I think anything you take off—For instance, last year they sold 32,000,000,000 in Pennsylvania, and 3,600,000,000 in West Virginia, or about 36,000,000,000 in all, and they practically reduced—they evidently needed every foot of it, whatever it was. It would be entirely guesswork for me to attempt to answer that question.

Q. Answer it in a general way. Since your company needs all of its supply, the diversion of any portion would affect you in the way suggested; is that correct?

A. Yes, the more diverted, the more severe the effect.

Q. And every increase in the amount furnished or supplied in the State of West Virginia would, to that extent, affect the con-

1195 sumers in the State of Pennsylvania, or your ability to supply them?

A. Of course, it would seem to follow; but as I understand the situation today, the Philadelphia Company and the Pittsburgh & West Virginia Company are supplying consumers along its line just about as efficiently as the Equitable Company is supplying the Pennsylvania consumers. In other words, to shut off a part of our gas in West Virginia wouldn't help West Virginia very much, because as I understand it, we are supplying the people along the Philadelphia Company lines in West Virginia just about as well as we are in Pennsylvania. I may be wrong, but that is the way it looks to me.

Q. Were you in close touch with the operating end and service end of the company?

A. No, I was not; I knew, in a general way, what they were doing. I was over there every day and talked with them.

(The Witness produces statements asked for upon the earlier examination, being "X Y Z-1 and X Y Z-2," and are as follows:)

1196 *Gas Sold in Cubic Feet.*

West Virginia.

Year ending March 31st.	Domestic.	Industrial.	Total.
1911.....	439,012,000	1,861,734,000	2,300,746,000
1912.....	483,482,000	2,396,773,000	2,880,255,000
1913.....	443,809,000	1,967,029,000	2,410,838,000
1914.....	457,586,000	1,642,204,000	2,099,790,000
1915.....	422,347,000	1,406,564,000	1,828,911,000
1916.....	449,406,000	1,856,522,000	2,305,928,000
1917.....	479,877,000	1,843,336,000	2,323,213,000
1918.....	576,736,000	2,797,522,000	3,374,258,000
9 mos. ending Dec. 31, 1918...	322,961,000	2,407,209,000	2,730,170,000
Year ending Dec. 31, 1919...	554,350,000	3,123,804,000	3,678,154,000

Pennsylvania.

1911.....	13,995,333,000	21,845,393,000	35,840,726,000
1912.....	14,271,143,000	20,388,432,000	34,659,575,000
1913.....	14,237,707,000	23,816,437,000	38,054,144,000
1914.....	15,416,964,000	22,638,231,000	38,055,195,000
1915.....	15,592,164,000	20,983,786,000	36,575,950,000
1916.....	16,475,997,000	26,184,209,000	42,660,206,000
1917.....	18,532,772,000	27,226,717,000	45,759,489,000
1918.....	21,685,539,000	22,136,204,000	43,821,743,000
9 mos. ending Dec. 31, 1918...	10,537,586,000	17,741,119,000	28,278,705,000
Year ending Dec. 31, 1919...	18,569,553,000	13,758,717,000	32,328,270,000

1197 *Wells Drilled.*

Pennsylvania.

Year ending.	Gas.	Purchased.	Dry.	Total.
3/31/11	37	3	5	45
3/31/12	25	4	5	34
3/31/13	40	4	13	57
3/31/14	59	3)	12	74)
		158) M.N.G.		158)
3/31/15	26	0	7	33
3/31/16	42	3	8	53
3/31/17	80	3	17	100
3/31/18	66	2	17	85
12/31/18 9 mos.	41	1	8	50
12/31/19	52	1	10	63

West Virginia.

3/31/11	107	2	14	123
3/31/12	113	3	15	131
3/31/13	136	7	13	156
3/31/14	82	9	14	105
3/31/15	75	1	12	88
3/31/16	129	28	15	172
3/31/17	154	15	42	211
3/31/18	140	4	45	189
12/31/18 9 mos.	77	2	19	98
12/31/19	69	2	29	100

1198 Q. In the statements you furnish of the gas sold, in cubic feet, for domestic and industrial purposes in 1911, to date, with reference to West Virginia and Pennsylvania separately, does the statement for West Virginia cover only the service of the Pittsburgh & West Virginia Gas Company?

A. Yes, sir.

Q. And the statement as to Pennsylvania refers to service by the Equitable Gas Company and affiliated subsidiaries?

A. That is correct.

Q. Is the same true with reference to the statement of wells drilled in the State of West Virginia and in the State of Pennsylvania, respectively?

A. It is.

(Four papers produced by the witness.)

Q. You have now produced copies of sale agreement between the Equitable Gas Company and the Pittsburgh & West Virginia Gas Company with modifications. The four papers are dated

severally July 31, 1914, May 3, 1916, October 1, 1917, and June 6, 1918, are they not?

A. Yes.

1199 Mr. Steptoe: We offer in evidence these several contracts, agreeing that the photostatic copies supplied to us may be used in lieu of the originals, and be marked for identification respectively West Virginia Exhibit No. 3, West Virginia Exhibit No. 4, West Virginia Exhibit No. 5, and West Virginia Exhibit No. 6.

The Witness:

A. I thought the first contract was made in 1917 or '18. I find I was mistaken. There seems to have been a contract made in 1914, fixing the rate to be paid, and that was modified in 1916,—May 3, 1916, and again modified on October 1, 1917, and again on June 6, 1918. I think the modification is mainly in the change of rate that was to be paid. At the same time, substantially what I said is correct, that the controller and general manager and myself would get together and fix about what the company ought to have, in order to perform its duties, until we came to the last, which was fixed, I think, in accordance with the West Virginia tariff rates, raising the price to 21 cents.

Q. The Pittsburgh & West Virginia Gas Company purchases a large portion of its supply of gas from the United Fuel Gas
1200 Company, at a point in Gilmer County, West Virginia, does it not?

A. Yes, contracted to purchase.

Q. Well, is that contract in writing and in force and effect at the present time?

A. So far as I know, it is still in effect. It was in writing, yes.

Q. Is that contract in your *position* or subject to your control?

A. The Pittsburgh & West Virginia Gas Company has its copy. It is in the control of the officers.

Q. Here in Pittsburgh?

A. Yes. I haven't it.

Q. Who is the officer who would have that in charge?

A. The secretary; W. B. Carson, secretary.

Q. Will you be good enough to produce the contract between the Pittsburgh & West Virginia Gas Company and the United Fuel Gas Company, to which we have just referred?

A. I will.

Mr. Weil: That may be supplied.

Redirect examination.

Mr. Weil:

Q. Judge Reed, you stated in your cross examination
1201 about extending a line to the Big Moses well. That was in Wetzel or Tyler County—which?

A. Tyler County.

Q. At the time that well came in, it was estimated at a hundred million feet a day, was it not, generally?

A. It was a very large well; I don't remember the estimate. Mr. Westinghouse referred to it as one of the largest wells ever struck. It made quite an impression at that time.

Q. Do you recall that for a long time that well was not shut in, but it blew gas?

A. No, I don't recall that. I think it is very likely, but I don't recall it.

Q. Do you recall the fact that by the time you got your line laid to that well, that you obtained practically no gas from the well?

A. Mr. Weil, that was before I had anything to do with the company. I could only speak from the records. There is no doubt some one connected with the business who can tell you that better than I can.

Q. I call to your attention the map marked "Pennsylvania Exhibit 23." Will you look at that?

A. Yes, sir.

Q. There are two fields that extend across the state line
1202 between Pennsylvania and West Virginia?

A. Yes, sir.

Q. Do you know what those fields are called?

A. No, sir.

Q. Is it not a fact that the gathering line—the 8-inch line—extends down into West Virginia and to the lower end of that field and across the state line, and connects with your 16-inch line in Greene County, Pennsylvania?

A. Yes, the map shows that.

Q. Do you know what the other field is called, to the westward, that also extends across the state line?

A. That is called the Hundred Field.

Q. Now, the lines operated by the Pittsburgh & West Virginia Gas Company and the lines operated by the Equitable Gas Company, connecting at the state line, or somewhere near the state line, as you explained, form one continuous line of transportation, do they not?

A. Yes.

Q. Do you know where those measuring stations, if any, are located?

A. Well, there is one at the line. There is quite a system of pipes there; there is one at Blackville.

Q. That is Blackville in what state?

A. It is on the line; the line goes through the town. I
1203 understand the measuring station is in West Virginia.

Q. Where is the gas on the other line measured?

A. In Littleton, West Virginia.

Q. Where are your measuring stations in Pennsylvania, if any, for that gas?

A. For the West Virginia gas?

Q. Yes.

A. There is nothing in Pennsylvania for that gas.

Q. For some of this West Virginia gas that is transported into Pennsylvania, have you no measuring stations in Pennsylvania?

A. We have none, only those two. That 8-inch line you spoke about is a suction line that connects with a pipe and goes to the Rogersville pump station.

Q. Where is the Rogersville pump station?

A. It is up there at the center of Greene County—station No. 29.

Q. The suction line that extends into the other field in West Virginia——

A. That works down the other way, down to Hundred pump station, station No. 12.

Q. That is, the gas in West Virginia is brought down to West Virginia——

A. The gas in Pennsylvania is brought down to West Virginia and sent out through the main line again into Pennsyl-
1204 vania.

Q. Take the field on the east there, right near the state line. I observe a suction line there, so-called. That is down on the map as a 10-inch line. Where is that taken?

A. That seems to go to the Rogersville station. It goes through a measuring station at the state line.

Q. Where is the Rogersville station located?

A. It is up in the center of Greene County.

Q. The capital needed by the Pittsburgh & West Virginia Gas Company for its operations, I think you stated in your examination in chief, was furnished by the Philadelphia Company?

A. Yes.

Q. And the same as to the Equitable Company?

A. Yes.

Q. And the Philadelphia Company, I believe you stated, owned the capital stock of the Pittsburgh & West Virginia Gas Company, and all of the capital stock of the Equitable Gas Company?

A. That is correct.

Recross-examination.

Mr. Steptoe:

Q. In compliance with my request, Judge Reed, you have
1205 produced a letter from the Pittsburgh & West Virginia Gas Company, C. S. Mitchell, Comptroller, to Mr. E. D. Leland, Assistant General Manager, under date of July 7, 1920, purporting to give the information we desired touching the purchase by the Fairmont & Grafton Gas Company from M. K. McMullin. Are you willing to furnish the information from that letter, or file that letter as your answer?

A. Yes, sir.

Q. To clear the matter up, please give the information from the letter.

A. Well, the letter states that under articles of agreement made September 27, 1906, between the Fairmont & Grafton Gas Company

and M. K. McMullin, the said M. K. McMullin, by deeds of assignment, dated September 27, 1906, conveyed to the Fairmont & Grafton Gas Company certain gas wells, pipe lines, oil and gas in fee, and oil and gas interests, for the consideration of $375,000. This purchase includes 11,000 acres of gas leaseholds located in West Virginia, having drilled thereon ten gas wells, with an open-flow output of over 30,000,000,000 cubic feet.

Q. I understand that you have no recollection or knowledge as to whether that property was or was not the property of the Home Gas Company, a West Virginia corporation, prior to McMullin's purchase?

1206 A. No, sir, I have no independent recollection, except in a most general way, that McMullin sold some property to the Fairmont & Grafton Gas Company.

Q. Mr. Weil asked you about a short line connecting a diminutive gas field in the southwest corner of Pennsylvania with the Hundred compresssing station. Can you tell us how long that line is?

A. Four or five miles, I guess. It seems there are a number of little gathering lines there shown by one line on the map.

Q. You don't know how much gas is acquired by that method?

A. No, sir.

Q. Mr. Weil also asked you about furnishing capital for the Equitable Gas Company and the Pittsburgh & West Virginia Gas Company by the Philadelphia Company. That was the parent company, was it not?

A. Yes.

Q. As a matter of fact, wasn't that indebtedness squared by the issuance of the capital stock of those two companies to the parent company?

A. It was at that time, but they have advanced them money since, and the company wasn't much richer by the stock.

Q. But upon the books of your company, the transaction was squared in that way, was it not?

A. Up to that date, 1914, I think, yes,—somewhere along there.

An adjournment was here taken until Thursday, July 8, 1920, at 10 o'clock A. M.

ORIGINAL, #20 & #21.

October Term, 1920.

COMMONWEALTH OF PENNSYLVANIA

vs.

STATE OF WEST VIRGINIA.

STATE OF OHIO

vs.

STATE OF WEST VIRGINIA.

Proceedings of Thursday, July 8, 1920.

1207 And now, Thursday, July 8, 1920, the hour of 10 o'clock having arrived, hearing resumed, pursuant to adjournment.

J. E. ANGLE, a witness produced on behalf of the Complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Weil:

Q. Mr. Angle, with what natural gas company are you connected?
A. The Fayette County Gas Company.
Q. And what is your position?
A. General superintendent.
Q. How long have you held that position?
A. For a little more than three years.
Q. Prior to that time, what was your experience in the gas business?
A. My experience has been practically all of my life, Mr. Weil, since the age of fourteen. I am now thirty-eight years old. I have had an experience principally in the field producing gas on
1208 transporting lines and on the distributing systems.
Q. With what gas companies were you connected prior to your being connected with the Fayette County Gas Company?
A. With the Corning Natural Gas Company in Ohio, and with the Johnstown Fuel Supply Company, in Pennsylvania.
Q. You have had experience then, as I understand you, with every branch of the business?
A. Yes, sir—local.

Q. In the production, distribution, transportation, and so forth?
A. Yes, sir.
Q. The Fayette County Gas Company supplies gas to what territory?
A. To various towns and cities in Westmoreland and Fayette Counties, Pennsylvania.
Q. Give us the names of some of the larger towns or cities?
A. The operations of the Fayette County gas plant are divided into divisions; the Uniontown Division, consisting of Uniontown, New Salem, McClellandtown, Hopewood, Rocoe and Masontown. The Connellsville Division consists of Connellsville, Dunbar, Dawson and Vanderbilt. Those are all towns in Fayette County. The Scottdale Division consists of Scottdale, Alverton, Tarrs and Ruffsdale. The Mt. Pleasant Division consists of Mt. Pleasant,
1209 Youngwood and New Stanton, all towns in Westmoreland County.

(Pennsylvania Exhibit No. 24 shown witness.)

Q. I show you a paper marked for identification Pennsylvania Exhibit No. 24, being a map of the Fayette County Gas Company's Natural gas system, and I ask you, does that correctly represent the lines of the Fayette Company's system and the towns and localities supplied by it?
A. It does.
Q. This map has the legend, "Towns supplied by Fayette County Gas Company, shown thus (by a red dot); gas lines owned by Fayette County Gas Company, shown thus (by a red line); gas lines used to supply Fayette County Gas Company with West Virginia Natural Gas Company, shown thus (being a yellow line)." What do you mean there by "with West Virginia Natural Gas Company"? Should not that have been "Gas lines used to supply Fayette County Gas Company with West Virginia Natural gas"?
A. It should have been; yes, sir.
Q. And the word "company" there means nothing, does it?
A. Means nothing.
Q. And should be out?
A. It should be out.
1210 Q. Who laid that line from the Pennsylvania line to the points indicated here on the map as Hawkins compressing station and Wright compressing station?
A. The Fayette County Gas Company.
Q. When was that laid?
A. In about the year of 1903.
Q. And how long was that operated by the Fayette County Company?
A. Until May 1, 1910.
Q. What became of it then?
A. It was sold by the Fayette County Gas Company to the Hope Natural Gas Company.
Q. In 1910?
A. May 1st; yes, sir.

Q. Prior to that time, did the Fayette County Gas Company have any territory in Weets Virginia?

A. It did.

Q. And how many wells did it have at the time it sold to the Hope Company?

A. Thirty-five.

Q. And how much territory, approximately, in round numbers—I don't care for the exact acreage.

A. A little more than 18,000 acres.

Q. How much money did it expend, if you know, in the laying of the line and the development of that gas in West Virginia?

1211 A. I don't know the amount of money it expended in the State of West Virginia.

Q. Prior to the time of that development in West Virginia, where were your gas fields?

A. In Fayette County, Pennsylvania.

Q. And in what district, do you remember?

A. In German and Menallan Townships.

Q. What were the conditions of those fields as to exhaustion at the time that you went into West Virginia for your supplies?

A. Those fields and wells were rapidly exhausting; to the extent that the Fayette County Gas Company had gone farther southwest, into Greene County, and into West Virginia, taking up additional acreage for a future supply of gas.

Q. At the time that you made the sale of the gas line and territory and wells to the Hope Natural Gas Company, did you, the Fayette County Gas Company, make a contract with the Hope Company for a supply of gas to the Fayette Company from the Hope?

A. We did.

Q. That was by written agreement?

A. Yes, sir.

Q. A contract to supply?

1212 A. It was.

(Paper shown witness.)

Q. That agreement has already been offered in evidence in this case by the Hope Natural Gas Company, in connection with its testimony. I show you a contract and ask you if that is the contract?

A. That is the contract.

Q. This has already been offered in evidence in this case in the testimony of Mr. Sullivan, as Pennsylvania Exhibit No. 21. That is the contract under which the Fayette took its gas from the Hope Company?

A. Yes, sir.

Q. Did the Fayette Company continue to operate and obtain gas from its own production?

A. It did.

Q. And does yet?

A. Yes, sir.

Q. Mr. Angle, what is the quantity of acreage of the Fayette

County Gas Company, under date of December 31, 1909, to December 31, 1919? Have you prepared a statement of that?

A. Yes, sir.

Q. Will you let me have that copy?

A. Yes, sir.

Q. That shows the operated and unoperated acreage of the

1213 Fayette County Gas Company for those years?

A. Yes, sir.

Q. Will you please read that into the record?

A. (Reading:)

Fayette County Gas Company.

Summary of Acreage as of December 31, 1909, *to* 1919.

	Operated.	Unoperated.	Total.
1909	3,820	14,391	18,211
1910	1,409	2,399	3,808
1911	1,477	816	2,293
1912	1,447	964	2,441
1913	1,447	964	2,441
1914	1,477	662	2,139
1915	1,477	3,836	5,313
1916	1,477	3,983	5,460
1917	1,835	4,843	6,678
1918	1,960	4,966	6,926
1919	1,949	4,860	6,809

Q. How many gas wells did the Fayette County Gas Company have in the year 1919?

A. Twenty-five or twenty-six, I am not sure just which.

Q. Could you give us the number they had for each of those years, from 1909 down to 1919?

A. No, I can't give you that.

1214 Q. How many did they have in 1918?

A. Twenty-five.

Q. And in 1917?

A. Twenty-five.

Q. What was the investment of the Fayette County Gas Company, as of December 31, 1919, in its transporting division?

A. $601,278.37.

Q. And what did that include, in a general way?

A. Right of ways, right of way expense, pipe, couplings, fittings, labor, teaming, freight, superintendent and general expense, tools.

Q. Tools and miscellaneous?

A. Yes, sir.

Q. And what was its investment in its distributing system in the various towns and cities?

A. $266,753.96.

Q. What were its other investments?

A. If you will pardon me, I did not take into consideration in the

distributing investment the cost of service lines and improvements owned by the Fayette County Gas Company. That would mean an additional investment in the distributing division, amounting to $180,103.10; and in addition, the investment in the field.

1215 Q. What was that?

A. Field lines, wells, leases, and so forth.

Q. And how much in that?

A. Amounting to $519,313.72.

Q. Have you prepared a statement of the number of consumers supplied by your company in each division, from 1910 to 1919, inclusive?

A. Yes, sir.

Q. That statement shows the different divisions which you have already described in your testimony?

A. Yes, sir.

Q. And also shows the number of domestic consumers?

A. Yes, sir.

Q. Other consumers, number dependent, municipalities and public buildings?

A. Yes, sir.

Q. What do you mean by "other consumers," after "domestic consumers?"

A. It means manufacturing consumers.

Q. Industrial then?

A. Industrial.

Q. And what do you mean by "number dependent?"

A. All of the number of persons who are supplied.

Q. I don't understand that exactly. Do you mean by

1216 that, the population?

A. The population supplied.

Q. The number of people, therefore, estimated, I suppose, from so many to each domestic consumer, and so forth?

A. Yes, sir.

Q. Is that what you mean?

A. Yes, sir.

Q. And how did you arrive at those figures?

A. Taking about four and a half persons to the consumer.

Q. And what do you mean by "municipalities and public buildings?"

A. That means city halls, hose houses, school buildings and public buildings of that kind.

Q. Under that heading, "municipalities and public buildings," you give there the number of thousand cubic feet, do you not?

A. Yes, sir.

Q. And not the number of consumers?

A. No, sir.

Q. But under "domestic consumers," you give the number of consumers?

A. Yes, sir.

Q. And under "other consumers," which you describe as industrial, you give the number of consumers?

1217 A. Yes, sir.

Q. Will you please read that into the record, giving the information as you have described generally in your testimony, with reference to your consumption from 1910 to 1919, inclusive?

A. (Reading:)

1910.

Division.	Domestic consumers.	Other consumers.	Number dependent. (4½ persons per consumer.)	Municipalities & public bldgs. M. cu. ft.
Uniontown	3584	69	16,128	24,824
Connellsville	3449	23	15,520	2,788
Scottdale	2035	11	9,157	1,046
Mt. Pleasant	763	5	3,433	....
Total	9831	108	44,238	28,658

1911.

Uniontown	3492	63	15,714	54,332
Connellsville	3337	13	15,016	16,368
Scottdale	1631	16	7,339	7,968
Mt. Pleasant	1227	4	5,521	223
Total	9687	96	43,590	78,891

1218

1912.

Uniontown	3541	63	15,934	53,766
Connellsville	3468	14	15,606	17,214
Scottdale	1654	18	7,443	9,125
Mt. Pleasant	1278	4	5,751	973
Total	9941	99	44,734	81,078

1913.

Uniontown	3797	58	17,086	47,433
Connellsville	3674	13	16,533	17,277
Scottdale	1731	17	7,789	8,627
Mt. Pleasant	1349	4	6,070	815
Total	10,551	92	47,478	74,152

1914.

Uniontown	3,852	53	17,334	51,219
Connellsville	3 652	19	16,434	19,977
Scottdale	1,777	18	7,996	9,059
Mt. Pleasant	1,392	6	6,264	1,190
Total	10,673	96	48,028	81,445

1219

Division.	Domestic consumers.	Other consumers.	Number dependent. (4½ persons per consumer.)	Municipalities & public bldgs. M. cu. ft.
1915.				
Uniontown	3,864	54	17,388	50,275
Connellsville	3,775	44	16,987	18,155
Scottdale	1,811	17	8,149	5,919
Mt. Pleasant	1,434	4	6,453	1,275
Total	10,884	119	48,977	75,624
1916.				
Uniontown	4,022	53	18,099	51,050
Connellsville	3,868	19	17,406	18,401
Scottdale	1,855	18	8,347	5,712
Mt. Pleasant	1,528	4	6,876	1,517
Total	11,273	94	50,728	76,680
1917.				
Uniontown	4,147	50	18,661	46,377
Connellsville	4,010	19	18,045	17,741
Scottdale	1,942	16	8,739	5,449
Mt. Pleasant	1,551	4	6,979	2,071
Total	11,650	89	52,424	71,636

1220

1918.				
Uniontown	4,278	46	19,251	39,016
Connellsville	4,112	19	18,504	12,596
Scottdale	1,903	15	8,563	3,525
Mt. Pleasant	1,611	4	7,249	1,875
Total	11,904	84	53,567	57,012
1919.				
Uniontown	4,421	20	19,895	36,714
Connellsville	4,186	24	18,837	14,284
Scottdale	1,967	14	8,851	2,937
Mt. Pleasant	1,811	4	8,149	1,930
Total	12,385	62	55,732	55,865

The towns which comprise each division are as follows:

Uniontown Division.	Connellsville Division.	Scottdale Division.	Mt. Pleasant Division.
Uniontown,	Connellsville,	Scottdale,	Mt. Pleasant.
New Salem.	Dunbar,	Alverton,	Youngwood,
McClellandtown,	Dawson,	Tarrs,	New Stanton.
Hopewood,	Vanderbilt.	Ruffsdale.	
Roncoe,			
Masontown.			

1221 Q. Have you prepared a statement, Mr. Angle, by months, of the sales of your company of domestic, factory, and the total of the amount purchased by the Hope and the Peoples Company, of the amount purchased by the Fayette from others, produced by the Fayette, and the total gas to account for the years 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918 and 1919, inclusive?

A. Yes, sir.

Q. Now, for the year 1910, in the month of January, did the Hope Company furnish any gas to the Fayette?

A. Yes, sir.

Q. How much?

A. 84,060,000 cubic feet.

Q. And did the Fayette furnish any to the Hope?

A. Yes, sir.

Q. How much?

A. 125,445,000 cubic feet.

Q. Which the Fayette sold to the Hope?

A. Yes, sir.

Q. And in February of that year, did the Hope furnish any to the Fayette?

A. Yes, sir.

Q. How much?

A. 103,108,000 cubic feet.

Q. And did the Fayette sell any to the Hope?

1222 A. Yes, sir.

Q. How much?

A. 148,252,000 cubic feet.

Q. And in March, did the Hope furnish any to the Fayette?

A. Yes, sir.

Q. How much?

A. 38,320,000 cubic feet.

Q. And did the Fayette furnish any to the Hope in that month?

A. Yes, sir.

Q. How much?

A. 82,124,000 cubic feet.

Q. After that time—January, February and March—the Fayette furnished no gas to the Hope?

A. No, sir.

Q. But purchased gas from the Hope?

A. Yes, sir.

Q. Have you prepared a statement showing, as I asked you before, by months, the sales for domestic, factory and total; the amount furnished by the Hope Company to the Fayette Company for domestic, factory, and total; and the amount purchased by the Fayette Company from others, and the amount produced by the Fayette, and the total gas to account for; for each month for the years mentioned?

A. We have not furnished that complete statement for each month for all of those years. In the year 1910, and up until March of 1911,

1223 we did not keep a record of the amount of gas produced by the Fayette County Gas Company.

Q. Or purchased?

A. Or purchased.

Q. From others than the Hope?

A. At that time we were not purchasing any gas from others. Aside from that year and those months, we have prepared such a report.

Q. Will you read that into the record, please?

A. (Reading:)

Month. 1910.	Sales (M cu. ft.)			Furnished by Hope.			Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
	Domestic.	Factory.	Total.	Domestic.	Factory.	Total.			
		39,554	39,554	.....	.....	.....	.....	.....	.....
January	160,502	58,956	219,458	.....	.....	.....	.....	.....	.....
		45,094	45,094	.....	.....	.....	.....	.....	.....
February ...	139,235	61,000	200,235	.....	.....	.....	.....	.....	.....
		43,804	43,804	.....	.....	.....	.....	.....	.....
March	114,548	67,433	181,981	.....	.....	.....	.....	.....	.....
April	90,396	106,016	196,412	.....	.....	.....	.....	.....	.....
May	69,881	132,589	202,470	69,881	177,072	246,953	.....	.....	.....
June	59,547	124,380	183,927	59,547	159,196	218,743	.....	.....	.....
July	41,647	94,930	136,577	41,647	130,806	172,453	.....	.....	.....
August	42,306	103,385	145,691	42,306	118,703	161,009	.....	.....	.....
September ..	48,008	135,976	183,984	48,008	136,400	184,408	.....	.....	.....
October	58,804	78,464	137,268	58,804	81,842	140,646	.....	.....	.....
November ..	115,362	84,423	199,785	115,362	80,337	195,699	.....	.....	.....
December ...	132,484	96,905	229,389	132,484	121,717	254,201	.....	.....	.....
	1,072,720	1,272,909	2,345,629	568,039	1,875,740	1,443,779	.....	.....	.....

Month.	Sales (M cu. ft.)			Furnished by Hope.			Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
1911.	Domestic.	Factory.	Total.	Domestic.	Factory.	Total.			
January	127,359	99,181	226,540	127,359	94,379	221,738	.....	.....	.....
February ...	107,785	86,015	193,800	107,785	92,905	200,690	.....	.....	.....
March	110,459	99,887	210,346	110,459	112,432	222,891	.....	23,467	246,358
April	103,996	93,695	197,691	103,996	73,151	177,147	.....	27,433	204,580
May	63,585	85,281	148,866	63,585	61,496	125,081	.....	32,596	157,677
June	43,871	81,349	125,220	43,871	60,153	104,024	.....	31,859	135,883
July	39,589	66,862	106,451	39,589	46,358	85,947	.....	29,474	115,421
August	41,872	79,866	121,738	41,872	50,403	92,275	.....	30,918	123,193
September ..	51,284	88,103	139,387	51,284	62,697	113,981	.....	30,448	144,429
October	65,981	100,740	166,721	65,981	97,133	163,114	.....	30,649	193,763
November ...	101,058	98,342	199,400	101,058	88,119	189,177	.....	29,631	218,808
December ...	112,596	105,101	217,697	112,596	82,650	195,246	.....	25,154	220,400
Total....	969,435	1,084,422	2,053,857	969,435	921,876	1,891,311	.....	291,629	.....

Fayette County Gas Company.

Month. 1912.	Sales (M cu. ft.) Domestic.	Factory.	Total.	Furnished by Hope. Domestic.	Factory.	Total.	Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
January	152,410	127,110	279,520	152,410	124,868	277,278	.....	24,366	301,614
February ...	142,808	112,801	255,609	142,808	102,523	245,331	.....	22,793	268,124
March	121,671	106,274	227,945	121,671	93,767	215,438	.....	26,896	242,334
April	83,727	102,764	186,491	83,727	89,702	173,429	.....	26,543	199,972
May	63,408	105,819	169,227	63,408	79,113	142,521	.....	28,092	170,613
June	52,646	77,225	129,871	52,546	54,695	107,241	.....	27,187	134,428
July	46,757	73,267	120,024	46,757	47,652	94,409	.....	24,918	119,327
August	49,561	78,043	127,604	49,561	56,559	106,120	.....	23,325	129,445
September ..	54,246	84,325	138,571	54,246	64,611	118,857	.....	23,367	142,224
October	72,085	101,268	173,353	72,085	109,137	181,222	.....	17,417	198,639
November ...	91,386	110,398	201,784	91,386	122,105	213,491	.....	16,663	230,154
December ...	115,246	113,067	228,313	115,246	107,744	222,990	.....	18,198	241,188
Total....	1,045,951	1,192,361	2,238,312	1,045,851	1,052,476	2,098,327	.....	279,735	2,378,062

Fayette County Gas Company.

Month.	Sales (M cu. ft.)			Furnished by Hope.			Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
1913.	Domestic.	Factory.	Total.	Domestic.	Factory.	Total.			
January	114,565	104,610	219,175	114,565	91,194	205,759	.....	23,152	228,912
February ...	126,798	111,190	237,988	126,798	99,194	225,992	.....	17,136	243,128
March	104,598	117,398	221,996	104,598	104,153	208,751	.....	19,204	227,955
April	100,058	98,421	198,479	100,058	66,912	166,970	.....	18,325	185,295
May	70,681	98,502	169,183	70,681	70,551	141,232	.....	23,330	164,562
June	58,534	90,139	148,673	58,534	57,122	115,656	.....	24,005	139,661
July	44,862	88,098	132,960	44,862	61,017	105,879	.....	25,528	131,407
August	45,344	88,903	134,247	45,344	61,675	107,019	.....	26,259	133,278
September ..	60,704	88,648	149,352	60,704	75,340	136,044	.....	24,974	161,028
October	74,125	100,447	174,572	74,125	95,019	169,144	.....	25,109	194,253
November ...	104,063	111,691	215,754	104,063	102,786	206,849	.....	21,976	228,825
December ...	113,900	94,606	208,506	113,900	82,558	196,458	.....	25,978	222,436
Total....	1,018,232	1,192,653	2,210,885	1,018,232	967,521	1,985,753	.....	274,977	2,260,730

Fayette County Gas Company.

Month.	Sales (M cu. ft.)			Furnished by Hope.			Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
1914.	Domestic.	Factory.	Total.	Domestic.	Factory.	Total.			
January	140,887	93,226	234,113	140,887	59,862	200,749	.....	25,074	225,823
February	134,892	86,112	221,004	134,892	69.255	204.147	.....	21,919	226,066
March	132,781	99,281	232,062	132,781	75,709	208,490	.....	23,954	232,444
April	99,781	92,566	192,347	99,781	63,077	162,858	.....	23,565	186,423
May	71,902	81,739	153,641	71,902	48,204	120,106	.....	24,913	145,019
June	54,870	66,989	121,859	54,870	33,083	87,953	.....	23,569	111,522
July	46,577	46,984	93,561	46,577	34,399	80,976	.....	25,568	106,544
August	48,659	57,322	105,981	48,659	46,147	94,806	.....	22,887	117,693
September ..	59,860	68,566	128,426	59,860	53,171	113,031	.....	25,167	138,198
October	66,449	81,785	148,234	66,449	74,546	140,995	.....	24,756	165,751
November ...	108,739	81,341	190,080	108,739	57,515	166,254	.....	23,443	189,697
December ...	123,954	79,573	203,527	123,954	60,858	184,812	.....	22,450	207,262
Total....	1,089,351	935,484	2,024,835	1,089,351	675,826	1,765,177	.....	287,265	2,052,442

Month. 1915.	Sales (M cu. ft.) Domestic.	Factory.	Total.	Furnished by Hope. Domestic.	Factory.	Total.	Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
January	131,991	81,520	213,511	131,991	16,569	148,560	.....	22,285	170,845
February	121,528	82,024	203,552	121,528	39,451	161,069	.....	22,093	183,162
March	123,237	96,468	219,705	123,237	71,882	195,119	.....	21,188	216,307
April	101,012	88,977	189,989	101,012	38,168	139,180	.....	23,608	162,788
May	68,478	106,846	175,324	68,478	75,894	144,372	.....	23,782	168,154
June	58,625	85,418	144,043	58,625	47,734	106,359	.....	23,557	129,916
July	49,617	60,671	110,288	49,617	39,734	89,351	.....	18,888	108,239
August	50,715	58,347	109,062	50,715	47,787	98,502	.....	14,773	113,275
September ..	54,721	68,081	122,802	54,721	53,029	107,750	.....	14,258	122,008
October	74,088	89,654	163,742	74,088	77,541	151,629	.....	14,402	166,031
November ...	99,400	114,400	213,800	99,400	97,744	197,144	.....	14,907	212,051
December ...	128,845	116,344	245,189	128,845	98,134	226,979	.....	19,291	246,270
Total....	1,062,257	1,048,750	2,111,007	1,062,257	703,757	1,766,014	.....	233,032	1,999,046

1230 *Fayette County Gas Company.*

Month.	Sales (M cu. ft.)			Furnished by Hope.			Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
1916.	Domestic.	Factory.	Total.	Domestic.	Factory.	Total.			
January	132,699	120,667	253,366	132,699	78,470	211,169	.....	28,967	240,136
February	122,689	120,649	243,338	122,689	101,770	224,459	.....	31,358	255,817
March	144,261	128,563	272,824	144,261	99,114	243,375	.....	32,557	275,932
April	100,495	115,930	216,425	100,495	85,825	186,320	.....	28,564	214,884
May	80,688	116,952	197,640	80,688	61,792	142,480	.....	31,488	173,968
June	62,033	85,672	147,705	62,033	41,901	103,934	.....	32,924	136,858
July	49,983	80,073	130,056	49,983	38,194	88,177	.....	35,396	123,573
August	48,817	88,216	137,033	48,817	53,119	101,936	.....	35,519	137,455
September ..	63,117	95,501	158,618	63,117	64,764	127,881	.....	33,247	161,128
October	83,295	112,992	196,287	83,295	85,400	168,695	2,795	31,104	202,594
November ...	105,641	118,936	224,577	105,641	88,687	194,328	7,177	35,976	237,481
December ...	133,324	102,655	235,979	133,324	84,537	217,861	4,495	28,249	250,605
Total....	1,127,042	1,286,806	2,413,848	1,127,042	883,573	2,010,615	14,467	385,349	2,410,431

Month. 1917.	Sales (M cu. ft.) Domestic.	Factory.	Total.	Furnished by Hope. Domestic.	Factory.	Total.	Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
January	150,084	117,693	267,777	150,084	82,354	232,438	7,235	28,946	268,619
February ...	157,066	97,378	254,444	157,066	68,737	225,803	4,621	21,377	251,801
March	129,285	120,759	250,044	129,285	97,465	226,750	.....	22,533	249,283
April	124,809	109,902	234,711	124,809	67,682	192,491	414	29,753	222,658
May	84,997	110,654	195,651	84,997	69,550	154,547	3,604	29,412	187,563
June	68,723	91,690	160,413	68,723	30,782	99,505	5,627	31,962	137,094
July	55,944	76,803	132,747	55,944	61,966	117,910	5,142	29,836	152,888
August	50,083	65,340	115,423	50,083	42,114	92,197	4,950	30,589	127,736
September ..	62,641	59,503	122,144	62,641	58,165	120,806	4,522	42,222	167,550
October	97,092	60,950	158,042	97,092	44,071	141,163	3,904	35,627	180,694
November ...	115,172	60,994	176,166	115,172	47,598	162,770	3,735	31,812	198,317
December ...	149,399	72,488	221,887	149,399	76,382	225,781	3,252	32,527	261,560
Total....	1,245,295	1,044,154	2,289,449	1,245,295	746,866	1,992,161	47,006	366,596	2,405,763

39—23.24

Month.	Sales (M cu. ft.)			Furnished by Hope.			Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
1918.	Domestic.	Factory.	Total.	Domestic.	Factory.	Total.			
January	197,998	57,891	255,889	197,998	58,594	256,592	2,466	29,009	288,067
February ...	138,288	46,547	184,835	138,288	60,661	198,949	2,806	33,843	235,598
March	115,023	53,677	168,700	115,023	28,752	143,775	25,660	29,529	198,964
April	121,410	53,978	175,388	102,529	.....	102,529	37,962	29,360	169,851
May	80,818	46,926	127,744	77,781	.....	77,781	21,925	28,578	128,284
June	59,448	41,076	100,524	59,448	16,179	75,627	18,438	18,625	112,690
July	61,028	33,089	94,117	61,028	40	61,068	5,530	30,790	97,388
August	55,689	31,301	86,990	43,875	.....	43,875	4,788	35,260	83,923
September ..	69,855	27,971	97,826	58,145	.....	58,145	6,170	48,465	112,780
October	87,627	34,115	121,742	85,024	.....	85,024	3,330	40,848	129,202
November ...	108,645	32,452	141,097	108,645	10,331	118,976	6,072	38,983	164,031
December ...	127,691	28,763	156,454	127,691	16,726	144,417	679	29,868	174,964
Total....	1,223,520	487,786	1,711,306	1,175,475	191,283	1,366,758	135,826	393,158	1,895,742

Fayette County Gas Company.

Month. 1919.	Sales (M cu. ft.) Domestic.	Factory.	Total.	Furnished by Hope. Domestic.	Factory.	Total.	Purchased by Fayette from others.	Produced by Fayette.	Total gas to ac. for.
January	151,197	34,225	185,422	151,197	7,852	159,049	2,038	33,360	194,447
February	130,866	38,359	169,225	130,866	11,205	142,071	2,815	41,657	186,543
March	125,831	38,770	164,601	125,831	16,335	142,166	3,637	30,154	175,957
April	119,519	39,992	159,511	115,130	.....	115,130	2,726	36,354	154,210
May	93,008	49,232	142,240	93,008	2,552	95,560	2,644	43,394	141,598
June	58,952	43,753	102,705	58,952	6,825	65,777	2,479	42,428	110,684
July	54,601	49,636	104,237	54,601	17,853	72,454	2,561	40,270	115,285
August	54,081	76,825	130,906	54,081	50,895	104,976	2,259	39,902	147,137
September ..	67,638	83,206	150,844	67,638	55,839	123,477	2,016	38,133	163,626
October	78,672	96,382	175,054	78,672	76,752	155,424	1,897	37,223	194,544
November ...	106,846	96,185	203,031	106,846	97,165	204,011	1,622	31,329	236,962
December ...	164,411	56,183	220,594	164,411	52,624	217,035	1,488	28,531	247,054
Total....	1,205,622	702,748	1,908,370	1,201,233	395,897	1,597,130	28,182	442,735	2,068,047

Q. Under the year 1918, you have "Gas furnished for domestic, factory," and so forth, by the Hope and Peoples. Have you
1234 the amount of this gas that was furnished by the Peoples Company separated from the amount furnished by the Hope?

A. Yes, sir.

Q. Will you read that into the record, please?

A. (Reading:) Under gas furnished by Hope and Peoples during the year 1918, the following was furnished by the Peoples Company:

January,	40,317
February,	31,076
March,	33,681
April,	31,753
May,	31,130
June,	29,049
July,	61,068
August,	43,731
September,	40,791
October,	25,272
November,	8,885
December,	296
Total, 1918,	377,049

Q. During the year 1919, you obtained 1,597,130,000 cubic feet by purchase from the Hope Company, and you purchased from oth-
ers 28,182,000, and you produced 442,735,000 feet of gas,
1235 as you have already indicated by the statement read into the record. From whom were those other purchases made? I don't care for the names, but where was the gas obtained from?

A. In Fayette County.

Q. From other producers in Fayette County?

A. Yes, sir.

Mr. Hoffheimer:

Q. Pennsylvania?

A. Pennsylvania.

Mr. Weil:

Q. Do you know of any other source from which you could obtain gas with which to supply the consumers of the Fayette Company, other than the Hope Company, at the present time?

A. I do not.

Q. Do you know of any gas territory or fields that would be tributary to the section supplied by you, or within a distance that you could run lines thereto, that could be obtained by the Fayette Company?

A. Not to produce a sufficient quantity of gas to take care of the consumers' requirements.

Q. If your gas supply was cut off, what percentage of
1236 wreckage or reclamation value would you estimate your plant would have?

Mr. Hoffheimer: That is objected to, on the grounds stated in objections to previous questions of similar character.
The Commissioner: Note the objection and let the witness answer.

A. I would not like to attempt to make such an estimate.
Q. Why?

Mr. Hoffheimer: The same objection.
The Commissioner: Note the objection.

A. Because the amount would be so small, in comparison to the cost, that it would be almost impossible for me to make such an estimate.
Q. Well, would it be of any practical value—a plant without a supply of natural gas?
A. It would be worth practically nothing.
Q. These figures that you have given on these statements that you have read into the record, are just so many million, or thousand thousand cubic feet?
A. Yes, sir.
1237 Q. You have not carried out, in other words, the figures to the thousands—only you have given the number of thousand cubic feet?
A. Yes, sir.
Q. In these statements which you have read?
A. Yes, sir.
Q. During the year 1919, and for several years previous, was there a shortage of gas upon your lines in your supply to consumers?
A. There was.
Q. Has that shortage been becoming more acute from year to year?
A. It has been.
Q. And were there any considerable periods, consecutively, during the last winter, where there were those shortages?
A. Yes, sir.
Q. Did you make an effort to get the gas from the Hope Company?
A. Sir?
Q. Did you make efforts to get the gas from the Hope Company, with which to supply your consumers?
A. Yes, sir.
1238 Q. Do you know whether or not they had the gas to deliver?
A. They reported to me that they did not have the gas to deliver, and were giving us the very best possible service and the greatest volume of gas that they had obtainable for us.
Q. Do you know whether or not the Fayette County Gas Company is in any way connected or affiliated with any of the so-called Standard companies?

A. Not that I know of.

Q. I am speaking now of the Standard Oil Company, of course, when I say Standard companies?

A. I understood you as meaning such.

Q. And who are the present officers of the Fayette County Gas Company?

A. George W. Crawford, president; L. B. Denning, vice president and general manager; F. I. Falk, secretary and treasurer; W. W. Rathbun, assistant secretary and treasurer. Do you wish also the directors of the company?

Q. Yes, give us the directors also.

A. The directors are George W. Crawford, John E. Gill, John W. Donnan, J. N. Garrard, John F. Leasgang.

Q. What is the size of the line of the Hope Natural Gas Company at the present time, connecting with your line, of the Fayette County Gas Company?

1239 A. Twelve-inch.

Q. And what is the size of your line?

A. Twelve-inch.

Q. That, I believe, you testified was a line originally constructed by you?

A. Yes, sir.

Q. Into West Virginia?

A. Yes, sir.

Q. Is that line just one continuous line going from West Virginia through into Pennsylvania?

A. Yes, sir.

Q. And where is the measuring station?

A. In West Virginia.

Q. At what point?

A. About 2,000 feet from the state line of Pennsylvania.

Q. Where is the compressing station?

A. Of the Hope Natural Gas Company?

Q. Yes.

A. In West Virginia.

Q. At what point? It is shown here on the map at Hawkins and Wright; is that right?

A. At Hawkins station, yes, sir, about twelve miles from the state line of Pennsylvania.

1240 Q. The Wright compressing station, how far is that from the state line?

A. I don't know.

Q. Where is your compressing station?

A. We have no compressing stations.

Q. None whatever?

A. No, sir.

Q. How far does your line extend from the Pennsylvania line to the northernmost part at Youngwood? About how long is that?

A. About eighty-five miles.

Q. And this map gives the size of the lines, of the main transportation lines, as 12-inch and 8-inch, 5-5/8, and so forth?

A. Yes, sir.

(Exhibit Pennsylvania No. 15 shown witness.)

Q. I show you a copy of Exhibit Pennsylvania No. 15, being the main lines of the Hope and Reserve Gas Companies, and ask you to look at that, and look at the line from Hawkins station to Wade, where it connects with the Fayette County Gas Company, and call your attention to the size of the Fairmont & Morgantown, within a comparatively short distance from that line, and ask you what would be the effect upon the transportation of gas through that 12-inch line, to supply the Fayette Company, if in the colder
1241 days of winter any connection was made between that line and Morgantown, or that line and Fairmont, for the purpose of supplying any deficit in those towns during those periods? What would be the effect upon your supply?

Mr. Hoffheimer: That is objected to, first, because it does not appear that the witness is qualified to answer the question. Secondly, because the question calls for a mere opinion or conclusion of the witness, and the answer called for would be entirely speculative in character. Thirdly, because the evidence is incompetent, irrelevant and immaterial.

The Commissioner: Note the objection and let the witness answer.

A. It would, without any question of doubt, put the Fayette County Gas Company out of business.

Cross-examination.

Mr. Steptoe:

Q. When was the Fayette County Gas Company incorporated?
A. In 1900.
Q. Under the laws of what state?
1242 A. West Virginia.
Q. It is still a West Virginia corporation?
A. It is.
Q. And has been transacting its business by virtue of its charter powers as such corporation at all times since its incorporation?
A. Yes, sir.
Q. Was the entire system shown on your map constructed by the Fayette County Gas Company?
A. It was not.
Q. What prior companies were taken over by or merged into the Fayette County Gas Company?
A. I don't know that I can name all of those companies, but one of them was the United Fuel—Not the United Fuel, but the Fayette Gas Fuel Company.
Q. Any others?
A. The Hildred Oil Company and the Marietta-Stillwagon Gas Company.

Q. Where did those companies operate, and what towns did they serve?

A. Only one of those companies served any consumers, to my knowledge, and that was the Fayette Gas Fuel Company supplying gas to Uniontown, Connellsville and Scottdale.

Q. Did it have territory and production in Pennsylvania?

1243 A. It did have.

Q. And the same territory and production passed over to the Fayette County Company?

A. Yes, sir.

Q. What lines shown on your map were constructed by the Fayette Gas Fuel Company?

A. One of the 8-inch lines from Uniontown to Connellsville and the 8-inch line from Connellsville to Scottdale; and there may have been some of the smaller branch lines shown on that map.

Q. Were the remaining lines constructed by the Fayette County Gas Company?

A. Not all of them.

Q. But a majority of them?

A. A majority of them.

Q. Especially the larger transmission lines and distributing lines?

A. No, some of those larger lines were constructed before the Fayette Gas Fuel Company was organized. They were constructed by the Southwest Natural Gas Company.

Q. Well, did the southwest Company enter into the holdings of the Fayette Gas Fuel Company?

A. They did, through the sale of their properties to other companies and individuals. They were later bought by the

1244 Fayette County Gas Company.

Q. And that early company served natural gas to portions of your territory, did it?

A. Yes, sir.

Q. What sections?

A. To Scottdale, Connellsville and Uniontown.

Q. Your map does not purport to show any of the gathering lines, does it?

A. It does not show them completely.

Q. It does not show any of the well lines?

A. No, sir.

Q. As a matter of fact, there are a number of gathering lines and all of the well lines that are not shown, and they connect with and feed into the line sshown on the map at various points?

A. They do.

Q. It of course does not show your distributing systems in the towns and villages served?

A. No, sir.

Q. Where were you prior to your connection with this company?

A. In the southern part of Ohio.

Q. For how many years?

A. Employed by gas companies, do you mean?

1245 Q. Yes. How long were you in Ohio?

A. I was born and raised in the State of Ohio, and lived

there until I came to Pennsylvania with the Fayette County Gas Company, on July 23, 1901.

Q. 1901?

A. Yes, sir.

Q. And how long did you stay with the Fayette County Gas Company—until the present time?

A. No, until April 1, 1907, I was transferred to the Johnstown Fuel Supply Company, a company owned and controlled by the Tree, Crawford & Company interests. It was sold in December, 1909, to Mr. Emmett Queen and his associates. I remained in the employ of that company, together with the gas department of the Citizens Light, Heat & Power Company of Johnstown, which was artificial, until February 1, 1911. Then I came back with the Fayette County Gas Company, locating at Connellsville, and have been with the company since that time.

Q. Is the George W. Crawford, the president and one of the directors of your company mentioned by you, the same George W. Crawford that is interested in the Ohio Cities Gas Company?

A. I do not know that he is interested in the Ohio Cities Gas Company.

1246 Q. Or in the East Ohio Gas Company?

A. I don't know that he is interested in the East Ohio Gas Company?

Q. Is the John E. Gill on your board of directors the same person who was, or has been for some time, president of the Manufacturers Light & Heat Company?

A. He is.

Q. Do you or do you not know that George W. Crawford is vice president of the Northwestern Ohio Natural Gas Company?

A. I do not know that he is vice president of the company. I have heard that he has some connection with the Northwestern Ohio Gas Company.

Q. I understand you to say that the sale and transfer by the Fayette County Gas Company to the Hope Natural Gas Company, of the pipe line marked in yellow on your map, extending from the Wright compressing station, in the State of West Virginia, northeastwardly to the state line, was made contemporaneously with the contract of the Hope Company to sell gas to the Fayette County Gas Company, under the contract you have put in evidence?

A. Did I understand you to say it was laid by the Hope Natural Gas Company?

Q. No. (Question repeated.)

A. The sale and transfer was made some time about the

1247 time when the contract was entered into.

Q. Was that sale and transfer evidenced by deed or other writing recorded ?

A. Not that I know of.

Q. How long have these fields in the State of Pennsylvania, that you refer to as becoming depleted, been operated?

A. Since 1887.

Q. And to supply the communities you have mentioned as now being served by your company, or some of them?

A. Yes, sir, some of them.

Q. Is your system constructed and operated as a whole or in separate divisions for the several communities you mentioned?

A. It is operated as a whole.

Q. What is the purpose of the divisions?

A. Dividing the number of consumers, and tabulating the volumes of gas sold to various sections for accounting purposes.

Q. So that the gas, whether produced by your company or purchased in the State of Pennsylvania, or purchased at the State line from the Hope Company, is all marketed through the same system?

A. It is.

Q. And all commingled and furnished together?

1248 A. Yes, sir.

Q. When did this decrease in the production of the wells in the Pennsylvania fields, and in the fields themselves, first become apparent?

A. In 1889 and 1890.

Q. Was that in the older fields in Pennsylvania or all of the fields in which your company was then operating?

A. In all of the fields supplying those communities with natural gas.

Q. Did that decrease become more apparent from year to year?

A. It did.

Q. Is the decrease still going on—becoming annually more apparent?

A. It is, so far as the older wells are concerned.

Q. What about the fields themselves? Has the decrease been apparent in the production of the fields and in the amounts produced from the new wells, as compared with the old wells?

A. Yes, sir.

Q. That decrease is manifest not only in decreased rock pressure but in volume?

A. Yes, sir.

Q. Is there any experimental work now going on in Fayette County for gas production?

A. The drilling of wells?

Q. Yes.

1249 A. Yes.

Q. Is there not some experimental work in that locality seeking to reach lower sands that have not heretofore been operated?

A. Yes, sir.

Q. With what success?

A. A very small amount of gas has been discovered.

Q. But it is true that quite recently those efforts to reach the lower sands are being tried out in that county, and some result is being obtained, is it not?

A. Yes, sir.

Q. As a practical gas man, would you say that there is a prospect of the discovery of a new field in Fayette County in that lower sand?

A. There is a possibility.

Q. Of course, everything that deep under the earth is more or less a possibility, isn't it?

A. Yes, sir.

Q. But there are hopes now of acquiring a production from that lower sand in sands in Fayette County hitherto not drilled into?

A. Yes, sir. We have taken up some leases in both Fayette and Westmoreland Counties, and are now engaged in drilling to those lower sands.

Q. What sands are those?

1250 A. The Speechley, the Bradford and the Kane.

Q. Are those the sands in which the gas strikes at Mckeesport were found?

A. Yes, sir.

Q. In your statement of the investment of the Fayette County Gas Company, in what you term the Transporting Department, amounting to $601,278, is that a statement of capital investment or the amounts expended by your company?

A. That is the book value that our company has kept: added to and taken from, for a number of years back. In fact, all of the statements relative to investment are taken in that same manner.

Q. And the figures that you have given for the transporting department, the distributing system and for other investment are what you call your capital investment?

A. Yes, sir.

Q. And to that you have added certain amounts each year for improvements or additions, and taken a certain depreciation?

A. I don't know that there has been a depreciation deduction from that. The "taken from" that I referred to is lines or equipment taken out of construction. That would be, in turn, taken out of that investment figure.

Q. How is your valuation arrived at?—By an appraise-

1251 ment?

A. No, sir.

Q. Or by an accumulation of expenditures in improvements, and so forth?

A. An accumulation of expenditures, was the investment.

Q. What about your wells and leases, how are they valued?

A. That is estimated. The operated and unoperated leases are estimated as to their value and location relative to gas production.

Q. On what basis do you value them?

A. I don't just know how that—what amount of value that was placed on each of those acres, whether operated or unoperated.

Q. Did you make any of these valuations?

A. Well, I was consulted at the time our office made the valuation, as to the location of leases, relative to gas production.

Q. In giving the valuation of your leases and wells, how do you charge up rentals, delay rentals and well rentals and so forth?—To capital account or to expenditures, operating expenses?

A. I am pretty sure that it is charged up as an item of expense.

Q. If I understand you, you take that out of your income derived from the operation of the plant?

1252 A. Yes, sir.

Q. That is, delay rentals, well rentals, and so forth?

A. That is my understanding; yes, sir.

Q. In the statement you gave us of the sales of gas, I observe that you have a heading as to the amount of gas furnished by the Hope, first for domestic and then for factory, and with a total of the two. Do you refer there to the Hope Natural Gas Company?

A. Yes, sir.

Q. And to the gas purchased by the Fayette County Gas Company from the Hope Company, under the contract you have offered in evidence?

A. Yes, sir.

Q. How do you ascertain and determine the amount of the gas acquired from the Hope Company, which is distributed by you to your domestic consumers?

A. By the measurement of the Wade Pitot tube measuring station.

Q. Where is that measuring station located?

A. About 2,000 feet in the state of West Virginia from the state line of Pennsylvania.

Q. Well, a part of these domestic consumers included in the amount assigned, resided at Youngwood, at the northern extremity of your system, do they not?

1253 A. Yes, sir.

Q. Do I understand you to mean that you can positively identify at Youngwood the amount of the gas purchased at or near the state line of West Virginia from the Hope Natural Gas Company?

A. No, sir.

Q. As a matter of fact, the gas is all mixed, as you stated awhile ago, with your own production and with the amounts purchased in the State of Pennsylvania?

A. Yes, sir.

Q. And you can't identify any cubic foot of West Virginia gas served at any particular point, can you?

A. No.

Q. Well, what is the meaning of your heading as to the amount furnished to domestic consumers by the Hope Company?

A. The meaning of that heading is that the total amount of gas is that gas which is furnished by the Hope Natural Gas Company, transported through the Fayette County Gas Company's main transporting lines, and distributed to its domestic and factory consumers. The division in that gas sold is determined by the total volume of gas sold to the domestic and factory consumers; deducting the amount of the gas furnished domestic consumers from the total readings of the Wade measuring station, the balance is

1254 the total arrived at—the total volume of gas furnished to the factory consumers.

Q. Then the heading on your account is not intended as a state-

ment by you that the identical gas from the Hope Company goes to any particular consumers, because that you cannot identify, can you?

A. We can't identify that.

Q. It is a method of keeping your books, with reference to your contract with the Hope Natural Gas Company?

A. That is the method of keeping our books.

Q. For what purposes does your company supply gas to its industrial consumers?

A. For various kinds of manufacturing.

Q. State some of them?

A. Steel, the manufacturing of glass, and a number of various small manufacturers.

Q. Do you furnish them at all periods in the year?

A. We do not.

Q. Do you furnish any of them at all times?

A. Not at times when there is a shortage of the supply of gas to our Class I, or domestic consumers.

Q. What is the reason of your supplying industrial consumers when you have a shortage in any amount necessary to supply your domestic consumers?

1255 A. At a time when we have a shortage in the supply to our domestic consumers, we do not then attempt to supply any great volume of gas to the industrial or factory consumers.

Q. Why do you supply any to your industrial consumers at such times?

A. Just a very small quantity, that might save an enormous loss to that industrial or manufacturing consumer.

Q. Well, as a practical gas man, why do you sell to industries at all? Why not conserve, for the benefit of the domestic consumer?

A. We know the earning coming from such sale of gas would not enable us to keep up our properties, and at the rates we receive for our domestic gas, we would not have an earning sufficiently enough to remain in business.

Q. I believe all of the gas companies—certainly all of the larger ones—adopt that same plan of selling to industrial consumers?

A. Yes, sir.

Q. And I understand you to say it is a necessity in the business?

A. It is.

Q. How much of the supply which your company purchases from the Hope Natural Gas Company could be spared, in order to save the plant of the Fayette County Gas Company from

1256 sudden dissipation, like "the one-hoss shay"?

A. I don't believe that we could spare any of it, especially in the cold winter season of the year.

Q. The fact is, that any reduction whatever in the quantity purchased will affect you more or less?

A. It will.

Q. And it depends on the amount taken off how far you will be affected?

A. Yes, sir.

Q. Do I correctly understand you to say that your shortage became more or less acute as far back as the year 1913?

A. No, I don't recall that I made a statement of that kind.

Q. When was that shortage first serious?

A. It began in the year 1916. In fact, back in 1915, we could notice the decrease in pressures was increasing; that is, the decrease in pressures on our main transporting lines.

Q. How about your ability to take care of your consumers, domestic and industrial? Has that become more or less difficult from year to year, since 1916?

A. It has.

Q. You mean, it has become more difficult?

A. Yes, sir.

Q. Do you anticipate that if present conditions generally maintain, that that difficulty will be greater from year to year in the future?

1257 A. It is my belief that it will.

Q. That is due to the decline in the production of gas?

A. Yes, sir, to the decline in production of gas and increased demand for it.

Q. Has that demand increased very much in the territory of your company?

A. It varies—sometimes increases and sometimes decreases. That is of course dependent entirely upon weather conditions, and the wish and desire of our various consumers. We, of course, have no power to regulate the volume of gas we sell to all of our classes of consumers, at all seasons of the year. We do, however, reserve the right to shut off the supply of gas from our industrial, or Class 2, unpreferred consumers; to give to the Class 1, preferred or domestic consumers, that supply of gas when it is necessary.

Mr. Weil:

Q. Under the contract you have with the Hope Company, to which you have already referred, and which has been shown to you, the Hope Company agreed, did it not, to supply you with all the gas required for your domestic consumption?

A. Yes, sir.

Q. And you are relying upon that for your supplies for

1258 your domestic consumers?

A. Yes, sir.

Q. And have been, since the making of that contract?

A. Yes, sir.

Q. You produce gas and buy gas from others in order to take care of any other consumption upon your lines, and for the purpose of carrying the peak loads, do you not?

A. Yes, sir.

Q. At the time of the making of that contract with the Hope Company, was there any question in the minds of the operators of the

Fayette County Gas Company, that they would be able to supply all the gas that would be required for domestic consumption?

A. Well, I wasn't with the Fayette County Gas Company at the time the contract was entered into; yet it has been the judgment of the company since 1911—that I have been with it—and up until possibly the year of 1914 or 1915, that there would not be any question but what we would be able to receive a supply of gas under the terms of that contract to supply our customers.

Q. Since that time, however, the doubt has come?

A. The doubt has came, and no one knows that better than I. It is to such a serious extent that my personal time has been required to remain in my office both night and day for as much as
1259 three and four weeks at a time. I mean by that to say that I have had to make sleeping quarters out of my office; and that with the exception of one occasion—which was over a period of four weeks—I had the privilege of eating three meals away from my desk.

Mr. Steptoe:

Q. The original idea of your company, then, as I understand it, was that you would thenceforward have the domestic consumers of the Fayette Gas Company taken care of by the supply purchased?

A. Yes, sir.

Mr. Hoffheimer:

Q. Your idea was that the Hope Company would supply the Fayette Gas Company gas sufficient to supply its domestic consumption forever; is that the idea?

A. For the term of twenty years, the contract.

Here a recess was taken until 1.30 o'clock, p. m.

1260 Afternoon Session.

And now, the hour of 1.30 o'clock p. m. having arrived, hearing resumed, pursuant to adjournment.

MARTIN B. DALY, having been first duly sworn, testified as follows:

Direct examination.

By Mr. Eagleson:

Q. Will you please state your name and place of residence?

A. M. B. Daly, Cleveland, Ohio.

Q. Mr. Daly, what is your present business?

A. President of the East Ohio Gas Company.

Q. How long have you been associated with the East Ohio Gas Company in that or other relationships?

A. Eighteen years.

Q. During those eighteen years, what positions have you held, if any, other than President, and the nature of your services?

A. That of President and General Manager and the nature of my services was in an executive capacity and in the general management of all of the affairs of the Company except possibly details in the auditing department.

1261 Q. Prior to 18 years ago, when you became identified with the East Ohio Gas Company, were you connected with the natural gas business in any way, and if so, where and in what relation?

A. I began the natural gas business in 1883 in Warren County, Pennsylvania, and later in Oil City, Pennsylvania.

Q. State just what you did in Pennsylvania and then follow through briefly.

A. In Pennsylvania, we developed gas in the vicinity of Sheffield. We piped that gas to Clarington, North Clarington, and also to the towns of Garfield and Farnsworth, all located in Warren County. That was as far as the development went during my connection with the Company. In 1883, I was engaged with the Oil City Fuel Supply Company in the construction of its plant in Oil City. In 1884, we constructed plants at Titusville and Meadville, Pennsylvania. In 1886, I was appointed general superintendent of the Buffalo Natural Gas Fuel Company and remained in that position until 1890, when I was engaged in construction work and in field management for the Northwestern Ohio Natural Gas Company, supplying

1262 gas at that time to Toledo, Fostoria, Tiffin, Freemont, and a number of other towns later on. About that same year, we began the construction of a plant at Sandusky, Norwalk, Bellevue, and Clyde. I remained in that position until 1902, when I was made general manager of the East Ohio Gas Company and remained only in an advisory capacity with the Northwestern and later on resigned as director and general superintendent of the Northwestern and devoted all my time to the East Ohio Gas Company in the development of the work there, which included general supervision of the field, drilling of wells, and the construction of plants in the various cities and towns that we now supply.

Q. Then, I take it that during the past thirty-seven years, you have been actively engaged in the natural gas business in all its aspects?

A. Yes, sir, it includes, I think, everything in connection with the business.

Q. I hand you what purports to be a map outline of the pipe lines, cities and towns served by the East Ohio Gas Company and the counties through which said pipe lines extend, and in which said municipalities are located, and which may be marked for

1263 identification "Ohio Exhibit No. 1" and ask you if that is a true representation of the property and locations of the municipalities and communities served by the East Ohio Gas Company?

A. Yes, sir, this map was prepared under my personal direction by our engineers, and I believe represents all of the localities. The

lines on this map show the transportation system of the company, but do not show the gathering lines. It also shows, by the dots, as explained in the legend, the cities and towns supplied by the company in the different counties. It is not drawn to a scale, on account of the size of the map, as it would have distorted it in many places.

Mr. Eagleson: We offer in evidence the map marked for identification "Ohio Exhibit No. 1."

Q. Now, Mr. Daly, from this map you may state, beginning at the southerly end of the system, the beginning of your lines, their connections, then proceed northward and describe them, giving the size and character of the main lines or transportation lines.

1264 A. The first line constructed was for the purpose of supplying Akron. It is a ten inch pipe line, known as No. 1, marked "No. 1—ten inch" on the map. It begins in Belmont County, at a station known to us as Pipe Creek. The name of the town is Round Bottom, on the West Virginia side. That ten inch line extends north and west, through Belmont County, Harrison, Tuscarawas, Stark and Summit Counties, as far north as Akron, Ohio. From Akron—from a point known and designated as Gross Farm, south of Akron, in Stark County, the twelve inch line was extended in 1902, to the city limits of Cleveland. The next line to be constructed was an eighteen inch pipe, starting at a point near the Ohio River and running north through the same counties, except that it takes in a corner of Carroll County—the point known as the McCreery Farm. This was laid in as nearly an air line as possible, to the city limits of Cleveland. The No. 3 pipe line was made of eighteen inch pipe. Starting in 1907, this pipe line started at Clarington in Monroe County.

Q. Where, with reference to the Ohio River?

A. Well, it is on the north bank of the Ohio River. Clarington is situated on the North bank of the Ohio River and a pipe

1265 line runs to that bank and connection is made with West Virginia by a number of pipe lines crossing the river and the headers placed on each side so one line may be shut off separately and not throw the whole system out of commission, in case of breakage of one pipe. That, with the exception of a small line of pipe in Monroe County, passes through the same counties as the original ten inch pipe, or No. 1. Pipe Line No. 4 was laid from what is known as the Price Farm Station in Belmont County, in 1909 and '10. This pipe line also crosses through a portion of Carroll County and the other counties named in describing Pipe Line No. 1. This No. 4 pipe line was laid in three divisions. The third division was completed in 1915 and the northern portion of it was 20" pipe. Pipe Line No. 5 was begun in 1912 and completed in 1913. I said the north side of the Ohio River a while ago. I suppose I should have said the west side. This pipe line also starts at Clarington Station in Monroe County and ends at the city limits of Cleveland.

Q. Mr. Daly, I call your attention, on the exhibit, to two pipe lines extending from the Gross Farm in Stark County to the north-

eastward over near Youngstown in Mahoning County. Describe those, giving their dimensions.

1266 A. The Mahoning Gas Company was acquired by purchase and the pipe line to connect Youngstown city with our main lines was started from the Gross Farm with fourteen inch pipe and from there to Austintown Junction that size pipe was continued. From Austintown Junction north to Warren in Trumbull County, Ohio, the pipe was reduced to ten and eight inches in size and going east from that Junction to Youngstown also twelve inches. Later it became necessary to lay a fourteen inch line from the Gross Farm to Austintown Junction and this was later extended by placing a sixteen inch pipe—I should say this was extended to a station on the east side of Youngstown known as Reo Station, indicated on the map by a yellow dot. In the purchase of the Mahoning, we acquired the Imperial line, running from the Pennsylvania State line to Youngstown, and through Mahoning County and the municipalities of East Palestine, Petersburg, New Middletown and Poland; then extending from this line southeastwardly, there was another line running to Struthers and Lowellville. Running East and North from Youngstown, there is an eight and six inch pipe line for the purpose of supplying Hubbard, and northwest from Youngstown to Girard there is a six inch pipe line for the purpose of supplying that city.

1267 You will note that there are various cross overs for the purpose of connecting all these lines and making them interchangeable and various branches running from the main lines, for the purpose of supplying municipalities beginning in Tuscarawas County and supplying Uhrichsville, Dennison, New Philadelphia and what was known at that time as Canal Dover, known now as Dover.

Q. Did you give the date of construction of the lines from the Gross Farm in Stark County across to Youngstown? If you have that date in mind, please give it.

A. The first fourteen and twelve inch lines were laid in the years 1908 and 1909—that is, they happened to lap over. That applies also to the Youngstown twelve inch from Austintown Junction to Youngstown. The branch running to Alliance was constructed for the purpose of supplying the Alliance Gas & Power Company with gas under contract, that Company doing the distributing. The connection for this Alliance branch is near the County line between Mahoning and Stark Counties. That was made in 1908. That is one and six-tenths miles only in length. The branch line running to Warren was also laid in 1908, connected with the Youngstown line at Austintown Junction, and that is approximately nine miles

1268 in length. Then there was a line laid from that Warren line east to Niles, two and 84/100ths miles. There was another line—the last line laid to Youngstown, being the sixteen inch line—was constructed during the years 1914 and '15. There is no memoranda here, but I remember the dates.

Q. That is, from the Gross Farm in Stark County?

A. Yes, sir, to Austintown Junction.

Q. Do you recall the distance from the Gross Farm in Stark County to Youngstown in Mahoning County?

A. The distance from Gross Farm to Austintown Junction is thirty-seven and a half miles and from Austin town Junction to Youngstown——

Q. Approximately?

A. About three miles.

Q. Now state briefly the division running down from the McKee Farm in Summit County through Wayne, Holmes, Ashland and Knox Counties.

A. That is known as the Mohican Division, and the distance from McKee Station to the most southerly point is approximately 54 miles. Branching from this main line is a line of pipe consisting of four inch, three inch and two inch pipe, for the supply of
1269 three small villages, Danville, Buckeye City and Brinkhaven. Those three towns are located in Knox County. The village of Loudenville, located in Ashland County, the city of Wooster in Wayne County, the village of Orrville, in Wayne County, Doylestown, Wadsworth in Medina County, Barberton and a portion of Akron in Summit County, were all supplied by that line. Running south and east into Holmes County from a point near the village of Shreve, Ohio, gas is supplied through that line to Shreve and also to Millersburg, both in Holmes County.

Q. What is the date of the construction of that line?

A. That line was acquired by purchase in December, 1912. It was constructed, I think, about three years prior to that time.

Q. Do the figures on this exhibit along these various lines indicate the diameter or dimension of the pipe?

A. Yes, sir, they are plainly marked there and as the lines are numbered the different sizes of the pipe are also given.

Q. That is, to illustrate, in Belmont County you have 1-10. That would be the first line laid northward from the Ohio River and it is a ten-inch pipe?

A. Yes, sir.

1270 Q. And No. 2-18 would be the 2nd line laid and is 18 inches in diameter, etc.?

A. Yes, that is correct.

Q. What is the distance, if you know, Mr. Daly, from the southerly terminus of these lines at the Ohio River in Belmont and Monroe Counties to their northerly termini at or near Cleveland in Cuyahoga County?

A. You will note there is a little difference in the routes taken by these pipe lines. No. 1 is the longest, approximately 134 miles in length. No. 2 pipe line is, to reach the city limits, 121 miles and No. 3 pipe line, 127 miles. You will note that No. 5 is not quite as long. It is used as a loop line. It is practically a hundred miles in length. It is used for storage purposes. You can transport through one pipe line for a short distance as much as you can transport through two for a long distance. This pipe line was built for the purpose of increasing the supply in the northerly part of the state.

Q. Now, where does the gas from these pipe lines enter into the distributive system in Cleveland?

A. All the gas passes through a large measuring station just outside of the city limits.

Q. Is there any spot on the map that you can designate?

1271 A. All gas passes through two measuring stations—all this gas that comes up through these lines—the Bedford and Richardson stations, indicated by a yellow circle, just about three or four miles south of Cleveland.

Q. From there it goes into the distributive lines supplying the city of Cleveland?

A. Yes, and the suburbs of Cleveland—East Cleveland, Lakewood and other communities.

Q. Your exhibit doesn't show a pipe line connection between the Richardson and Bedford Stations and the red dot in a circle, indicating the city of Cleveland?

A. That is probably due to the fact that the Cuyahoga River comes down through there, and the canal, and those lines have probably been cut off at that point. Richardson Station is almost on the bank and Bedford Station just south of the river. Two of the large lines from Richardson Station run west and cross the river and supply the west side of Cleveland. Two other lines—larger lines—lie north from the station on the Baltimore and Ohio Railroad, known as Willow Station, run along the Railroad and connecting with Fifty-fifth Street and running thence directly

1272 north and south clear across the city of Cleveland, a distance from the station of about ten miles. That includes the pipe in Fifty-fifth Street in the city of Cleveland.

Q. Did I understand you to say that down in Monroe County your lines Nos. 3, 4 and 5 extended under the river on to the West Virginia side?

A. No, sir, I didn't intend to say that. Our lines connect with what are known as headers, and on each side of the river those headers are placed and instead of having three pipe lines cross the river, we have ten or twelve of the smaller sized pipes, each with gates on, one on the West Virginia side and one on the Ohio side, the intention being to get as near the State line as possible. Of course, it is almost impossible to say just where the State line is between Ohio and West Virginia. It wouldn't be practicable to place the valves just on the State line, because they would be out in the navigable water and they could not be operated.

Q. Does the East Ohio Gas Company own those ten or twelve lines, as you have described them, that extend under the river?

A. I think there was some division of cost. We attempted to carry the gas to the State line. They own the valves on the

1273 east side of the river and we own the valves on the west side of the river. Just how the distribution of the construction of those lines across the river was made, I am not prepared to state. I think probably it was divided equally between the two companies.

Q. The company owning the gates on the east side of the river is the Hope Natural Gas Company?

A. Yes.

Q. Give the owners of the stock of the East Ohio Gas Company, Mr. Daly.

A. Over 99 per cent of the stock of the East Ohio Gas Company is owned by the Standard Oil Co. of New Jersey.

Q. What are the sources of your gas supply?

A. We purchase nearly all of our gas—approximately 80 per cent of it from the Hope Natural Gas Co.

Q. And the remaining 20 per cent?

A. We produce a certain amount and we purchase some. I can give you the exact amounts, if you would like to have them. I have them for the years 1915 to 1919 inclusive.

Q. That would be the amounts of gas purchased and produced?

1274 A. The amounts purchased and produced. We purchased in 1919, 32,349,750,000 feet from the Hope Natural Gas Company; we produced 8,201,376,000 feet and we purchased from independent producers in Ohio 2,918,367,000 feet.

Q. Run back through 1917 and give like amounts for those years.

A. In 1918, we purchased from the Hope, 36,069,354,000 feet; produced in Ohio 8,317,075,000 feet. Purchased in Ohio 4,290,920,000 feet. In 1917, we purchased from the Hope 44,036,867,000 feet; produced in Ohio 5,973,267,000 feet and purchased in Ohio 6,251,153,000 feet. In 1916, we purchased from the Hope, 45,027,900,000 feet; produced in Ohio 3,863,769,000 feet, and purchased in Ohio 15,191,300,000 feet. In 1915, we purchased from the Hope Natural Gas Company 20,177,377,000 feet; produced in Ohio 1,715,735,000 feet and purchased in Ohio 30,554,987,000 feet. Our sales for those years were 1915, 52,448,000,000; 1916, 65,000,000,000; 1917, 56,000,000,000; 1918, 48,000,000,000; 1919, 43,000,000,000. The cause of the low purchase in 1915 from the Hope Natural Gas Company and the large amount purchased in Ohio was due to the development of what was

1275 known as the Lakewood Field, within the city of Lakewood, a suburb of Cleveland. It was necessary for us to purchase this gas, and consequently we had to arrange and did arrange with the Hope Natural Gas Company to permit us to purchase that gas during that year and sell it for industrial uses. That brought our very large sales up in 1916 to 64,000,000,000 feet.

Q. Mr. Daly, this so-called Lakewood Field has been referred to several times during the hearing here. I wish you would briefly state its origin and development and present status.

A. The Lakewood Field was accidentally discovered by the Winton Motor Company in drilling an experimental well for the purpose of getting shale gas for light work about the factory. Not getting that gas, they went on to a lower level and discovered this field. Many wells had been drilled in Cuyahoga County prior to that time. The East Ohio Gas Company had drilled a number of them but they were failures. This resulted in the development of the Lakewood field, which was confined almost entirely to the

city limits of Lakewood, and so it became a town lot development.
There were approximately nine hundred wells drilled in that
1276 field and the output in the year 1915 was over 28,000,000,-
000 feet. The decline was so rapid that in 1918 it produced less than one-fortieth of that amount, or a little over 650,000,000 feet. If you will divide that by twelve and again by thirty or divide it by 360, you will see they were getting about 2,000,000 feet a day out of the entire field, where we were getting over 80,000,000. That field, with the exception of one or two wells that are just hanging on, getting 40,000 feet a day, where they happened to drill some distance away from other wells and getting dry holes between, is entirely exhausted.

Q. When was the East Ohio Gas Company incorporated and when did it begin business?

A. Incorporated under the laws of Ohio September 8th, 1898, with a capital stock of $1,000,000. It was formed for the purpose of supplying natural gas to Canton, Akron, and other Ohio towns between Akron and the Ohio River.

Q. And up until the construction of the five main lines which you have described as running northward from the lines of the Hope Natural Gas Company, did it confine itself to the procuring
and development of gas territory within the state of Ohio?
1277 A. No, it had no territory in the state of Ohio. The East Ohio Gas Company had no territory in the State of Ohio until after 1903.

Q. Prior to 1903, where did it procure its gas?

A. Purchased it under contract from the Hope Natural Gas Company. That contract was entered into prior to the construction of the No. 1 ten inch line running from Pipe Creek to Akron.

Q. Then since the inception of the East Ohio Gas Company in 1898, it has been procuring gas delivered to it from West Virginia by the Hope Natural Gas Company?

A. Yes, sir, it didn't start any development for itself until 1906 or 1907. At that time, it acquired about 80,000 acres of leaseholds in Cuyahoga, Monroe, Medina and Ashland Counties. It drilled one well in Cuyahoga County, three in Ashland, two in Lorain—we drilled a total in those two years of nine wells and all were dry holes.

Q. State briefly what has been the activity of the East Ohio Gas Company in obtaining and developing Ohio Territory up until the present time.

A. The Company has been very diligent in pursuing and prospecting with a view of keeping up its gas supply. The growth of
the cities was so much beyond the expectation of those who
1278 agreed to and became obligated to furnish gas that we found it necessary to get gas from every source possible. We leased territory in Hocking, Medina, Wayne, Cuyahoga and Lake Counties and they were all tried. We drilled in those counties 251 producing wells.

Q. That is, at the present time?

A. At the present time. We drilled 71 wells last year and 54 of the 71 were productive. 17 were dry. They were drilled at a cost of $582,000.00. Notwithstanding that addition to our production, there was a decline in the volume of gas of something over five per cent. Our gas fields don't decline as rapidly as they would if we were obliged to use them all the time. We keep those gas fields for the peak load, in an effort to give the people adequate service. Of course, during the winter of 1920, which was an unusually severe winter, as compared with 1919,—we had a very mild winter in 1919—it was necessary for us to keep those wells working nearly all the time and then we were unable to give service.

Q. What acreage have you in Ohio now under lease?

A. We have approximately 316,000 acres.

Q. What portion of that is operated?

A. About 16,000 acres.

1279 Q. What do you say as to the remainder of it being possible production and what part of it do you regard wildcat, if any?

A. Well, it is all speculative. The Clinton Rock is a very uncertain quantity. In Cuyahoga County we have drilled a number of dry holes and we have obtained some fairly good producing wells. The sand, however, is not very thick, and the life of a well is very short. The belt seems to be very narrow and crooked. It is very difficult to follow it. We are just now in a pocket where we are unable to get out in any way and so we have concluded we are at the end of our string. In Wayne County we drilled a well to a depth of 3,600 feet and were fortunate in striking a very fine gas well, and congratulated ourselves that we had secured a field that we could use for the peak load period to tide over, but we drilled eight wells around it and have not secured another producer. That illustrates the hazard of the business in drilling for gas in Ohio; but we are obliged to take those chances, and we think if we can get our money back on gas produced in Ohio that we have profited by it, because we gain enough to tide over and carry our customers,—a large number of customers—that we otherwise could not care for at all. So practically 300,000 acres—there may be some gas territory on it—some of it looks as though it might be good, but of course we think there is a chance in some part

1280 of it. All gas companies in Ohio are taking the same chances we are.

Q. Would you say as to whether or not the remaining leasehold acreage that you carry is what might be termed wildcat?

A. Well, I would term it wildcat. I wouldn't want to condemn it; I think we have a chance of getting some gas on some portions of it or of course we wouldn't attempt to operate it.

Q. You are perfectly willing, because of the gas shortage, of taking your chance or feeling your way into it?

A. Yes, sir; that is what we must do if we are going to develop gas fields and it is not a question so much of developing gas fields in Ohio as it is getting a little gas production here and there—small pools. They all help.

Q. You obtain your gas that you do obtain from the Hope Natural Gas Company across the Ohio River under or by virtue of a written contract?

A. Yes, sir.

Mr. Eagleson: I believe that contract is already in evidence in this case and is Pennsylvania Exhibit No. 19, to which we here make reference.

Q. Have you any information at hand to show the decline in any of your Ohio gas production or fields?

A. I think I do not have; I know from our reports, how-
1281 ever, that our decline last year was about as I have stated—five per cent. That was due to the new drilling; the fresh wells kept up the average. Of course the old field declined. Just what that decline would have been had we not included the new production I am not in position to state.

Q. What do you say as to the recognized or known gas bearing sands or strata in Ohio having been either developed or in process of development by either your company or other companies operating in Ohio?

A. There is no question but all known gas belts, or even those that are under suspicion, are being tested pretty thoroughly all the time. There are several gas companies operating in Ohio. All are very active in the different fields, each seeking to get its full share, and all are operating at the present time as many strings of tools as it is possible for them to engage workmen for and secure the necessary material.

Q. Does your company maintain a department for the purpose of taking up acreage and following up promptly any leads or new discoveries of gas?

A. Yes, we maintain quite a large organization for that purpose, —engineers, leasehold men, geologists and the general run of experts that go in connection with that department. We also have seven-
teen strings of tools at the present time in operation and we
1282 have had as high as twenty-two. That, considering the acreage we have, is a large number.

Q. What is the total number of your consumers in Ohio?

A. I have the totals here by towns. The total number of consumers, as is shown here, on December 31st, 1919, was 328,954. That, however, does not include 19,000 meters that were not read during December for various reasons. We do not render bills for any meter that registers less than 1000, so that takes up a number. In December I think it was 10,000 of those; then a great many people were away from home in December, so we are subject to call on about 348,000 people.

Q. Can you give us a list of at least the principal munici-
1283 palities and cities that you supply gas to?

A. Yes, sir; I think I have that here:

Towns served as of December 31, 1919.	Number of consumers.
Cleveland	208,294
Akron	32,655
Kenmore	1,866
Cuyahoga Falls	1,890
Canton	18,685
North Canton	370
Massillon	4,915
Dover	1,971
New Philadelphia	2,704
Uhrichsville and Dennison	2,861
Kent	1,623
Ravenna	1,872
Youngstown	25,687
Warren	5,925
Niles	2,381
Girard	1,268
Hubbard	596
Struthers	1,302
Lowellville	297
East Palestine	1,363
Poland	171
New Middletown	65
Petersburg	94
Wooster	2,540
Orrville	1,114
Shreve	373
Loudonville	3,643
Barberton	3,272
Wadsworth	1,101
Dovlestown	270
Millersburg	351
Danville	194
Buckeye City	116
Gann (Brinkhaven)	125

Q. Now those towns are scattered over your system from
1284 Southeastern Ohio in Monroe County to Cleveland on Lake Erie, and from Danville in Knox County to Millersville in Monroe County, are they, Mr. Daly?

A. Yes, and extend further down through the Southeastern corner of Monroe County to East Palestine and North in Trumbull County to the City of Warren; East to the City of Urbana in Portage County also. The beginning, however, of the distribution does not take place until after the lines enter Tuscarora County, Uhrichsville and Dennison being the furthest South.

Q. In that list do you have the cities of Cleveland, Canton, Akron, indirectly Alliance, Youngstown and Warren?

A. Yes, all of those.

Q. Massillon?

A. Yes.

Q. Can you give us accurately, or if not, an estimate of the number of people dependent upon your company for natural gas supply?

A. The population of the cities and towns supplied by the east Ohio Gas Company, under franchise, and not including Al-
1285 liance that we supply indirectly, is in excess of sixteen hundred thousand.

Q. Do you supply gas to subdivisions of the state, such as municipalities, counties, school boards, and so forth?

A. Yes, sir.

Q. Can you give us approximately a list of your meter connections for subdivisions of the state, such as municipalities, counties, and school boards, as of December 31, 1919?

A. Yes.

Q. Please do so.

A. (Reading:)

	Township trustees.	U. S. Govt.	State.	County.	City.	Schools.	Total.
Dennison,	..	..	..	..	1	2	3
Kent,	..	..	..	..	1	4	5
Ravenna,	..	..	..	4	2	5	11
Youngstown,	..	1	..	5	21	31	58
Girard,	..	..	..	..	2	5	7
Hubbard,	..	..	..	..	2	2	4
Struthers,	..	..	..	..	2	3	5
Lowellville,	..	..	..	..	1	..	1
East Palestine,	..	..	..	..	2	1	3
Poland,	..	..	..	..	1	..	1
New Middletown,	..	..	..	..	..	1	1
Petersburg,	..	..	..	..	..	1	1
Warren,	..	1	..	2	4	9	16
Niles,	..	..	..	..	4	3	7
Wooster,	..	1	5	3	6	6	21
Orrville,	..	..	..	..	1	3	4
Shreve,	..	..	..	..	2	1	3
Loudonville,	..	..	..	..	3	3	6

	Township trustees.	U. S. Govt.	State.	County.	City.	Schools.	Total.
Barberton,	..	..	..	..	..	3	3
Wadsworth,	..	..	..	..	..	2	2
Doylestown,	..	..	..	..	1	2	3
Millersburg,	..	..	..	..	..	1	1
Danville,	..	..	..	..	..	1	1
Gann (Brinkhaven),	..	..	..	..	..	1	1
	2	9	10	23	290	441	775
Cleveland & Suburbs,	..	4	4	2	170	275	455
Akron,	..	1	1	3	31	28	64
Cuyahoga Falls,	..	..	..	..	3	1	4
Kenmore,	..	..	..	..	3	2	5
Canton,	..	..	..	2	11	17	30
North Canton,	..	..	..	..	..	1	1
Massillon,	..	1	..	..	7	10	18
Dover,	1	..	..	..	4	6	11
New Philadelphia,	1	..	..	2	3	9	15
Uhrichsville,	..	..	..	..	1	2	3

1287 Total churches and parsonages entire system,..... 1,331
" charitable institutions " " 202

2,308

Q. Now, with the sources of gas supply such as you have described from the Hope Natural Gas Company and by purchase from producers in Ohio, together with your own production, what has been your experience with reference to being able to meet the demand made upon you for natural gas during the last two or three or four years?

A. During the winter of 1917, we experienced our first serious shortage, that is, of any length of time. During 1918, our supply was fairly good, on account of the mild weather.

Q. That would be the winter of '18 and '19?

A. No, that would be the winter of '17 and '18. The winter of '18 and '19 was very cold, and we suffered a very serious shortage, and we were short in the City of Cleveland over 50,000,000 feet per day of our requirements. We have been obliged to discontinue all extensions. There are nearly 20,000 homes in Cleveland without any kind of gas, on account of inability to supply them. Last year we were enabled to purchase from the Hope Natural Gas Company a considerable increased amount of gas, as they told us, by reason of the fact that Pittsburgh had been relieved through the McKeesport field. Unless there is some other McKeesport comes to the
1288 rescue next winter, we will probably be 75,000,000 feet short of our demand.

Q. What is the fact, if a fact, and to what extent are many of your consumers, principally domestic consumers solely dependent upon natural gas for fuel?

Mr. Hoffheimer: Objected to, on the grounds stated to previous questions of the same character.

The Commissioner: Note the objection.

A. I would be unable to answer that question. It would require very careful survey, and I assume that nearly all people are dependent upon natural gas for cooking, water heating, lighting—those who use gas for lighting—but for heating they could probably, in a great majority of cases in Cleveland—I am not so familiar with other places—use coal appliances for heating, if they should be so unfortunate as to be deprived of gas. Of course, that would be at a great sacrifice and cost to the city and consumer and all concerned.

Q. Will you state, if you know, to what extent your consumers at the present time are equipped with appliances for fuel other than natural gas?

1289 A. I should say probably 30 or 40 per cent of them use gas in coal appliances. By taking out the gas appliances they could use coal. That has been resorted to, but the same consumers have a number of other appliances that they can't convert, such as the cookstove, gas grates and appliances for heating water.

Q. Then would there be approximately 60 or 70 per cent of your do-

mestic consumers that at the present time have appliances which are not convertible from gas to coal consumption for heating?

A. Yes, I would say that.

Q. What is your rule or custom during the extreme cold periods of the year, or at other times, with reference to confining your delivery of gas to and for domestic consumption.

A. We confine it strictly to domestic consumption, and we go further than that and we send out notices to those domestic consumers who use over 100,000 feet per month, that they must discontinue. That we found necessary during the past two or three years. Strictly speaking, we have no industrial, except during the summer months, unless it is some emergency case, where we have a request from the state or municipality to tide over. That occurred once at the State Hospital in Cleveland, and once at the State Hospital in Massillon. A large number of patients were dependent
1290 upon it there, and the coal had not arrived. Such cases as that, of course, are always taken care of, if it is possible at all to do it.

Q. Is it not a fact that the Public Utilities Commission of Ohio issues from year to year what it terms its administrative orders to the natural gas companies of Ohio, classifying the consumers and ordering that in case of any shortage that would render the companies unable to meet the needs of all classes of consumers, that they are to be shut off from all classes other than domestic, to the end that domestic consumers might have the first and prior right to gas?

A. Yes, the Commission has issued such an order.

Q. How frequently?

A. That order I think was issued in 1919, and also in 1918. I don't recall any having been issued prior to that time.

Q. To refresh your recollection, Mr. Daly, is it not a fact that in the cold winter of 1917, the Commission issued its administrative order, making it mandatory that all gas companies shut off all industrial and commercial use of natural gas, and give it exclusively to domestic consumers, and that they sent their inspectors to open branch offices at Cleveland and Cincinnati and elsewhere, to assist the company in enforcing that order?

1291 A. I understood you to say that this order applied to the large domestic user.

Q. No; I was dealing with domestics all as a class.

A. The order applying to industrials has been in existence I think five or six years, but there has been also an order of the same tenor, that applies to domestic consumers using over 100,000 cubic feet in a month.

Q. That is to say, when the amount of gas that the companies are able to deliver in the peak load period of the year, or in the cold period of the year, is inadequate to meet the demands of the most preferred class of consumers, the domestics, the Commission has issued an order, restricting the largest domestic consumers to a stipulated amount of 100,000 feet per month?

A. Yes.

Q. Can you give the class of consumers which the Commission has

recognized, and which your company, pursuant to the Commission's orders, recognizes and serves?

A. Do you mean the preferred consumer?

Q. All of them, and then we will get to that.

A. The Commission recognizes both domestic and industrial, except that the domestic must at all times be the preferred consumer.

Q. What is the fact, with reference to any contracts which
1292 your company may have in Ohio for service to industries containing a provision reserving to you the right to give preference to domestic consumers?

A. We reserve the right to discontinue the supply to industrial users of gas at any time without notice, if in our judgment it may be necessary for any cause, and especially when the supply is needed for domestic use.

Q. That is true notwithstanding the administrative orders of the Public Utilities Commission of Ohio in relation to that subject?

A. That was a condition of the contract prior to the administrative order.

Q. What is the fact, if you know, as to whether or not those consumers located nearest your source of supply had a better or more dependable pressure and service than the consumers farthest distant?

A. Naturally the consumer located nearest to the point of distribution between the high and low pressure will get a better supply than those farthest away. Each one taking out a little lessens the pressure to a certain extent. It may not be noticeable until you get a considerable distance away, but it is a very natural result that the nearer to the distributing point from the high to the low pressure, the greater the pressure to the consumer. It doesn't
1293 always follow that that is the best service, when he gets greater pressure. If you had adequate pressure to go all around, the man getting the lower pressure would be just as well served; but if you had a demand and took it out of the line to the extent that there is not enough gas left, naturally the man away the farthest distance doesn't get any service. We attempt to overcome that by using a belt line; you might describe it as a wagon-wheel—various distributing lines running towards the hub. That is the high pressure, and then radiating from that, to various regulators arranged around a circle, all feeding toward the center. It is not always a practicable thing to do, to get a plant of that kind in a city that is cut up by bridges and railroads and sand hills and all that; but wherever it is possible we do it.

Q. Can you give to the stenographer in concrete form the gas purchased by the East Ohio Gas Company, and produced and sold during the year 1919?

A. Yes, sir.

1294 The East Ohio Gas Company.

Gas Purchased, Produced and Sold During Year 1919.

Purchased	35,268,117	M Cubic Feet
Produced	8,201,776	" "
Sold	43,469,893	" "

Distribution of Gas Sold.

Domestic	41,818,767	M Cubic Feet
Industrial	323,299	" "
Churches, Schools & Public Buildings	696,941	" "
To other Gas Companies	630,886	" "
	43,469,893	" "

Q. Can you give the gas produced and purchased by the East Ohio Gas Company, during the years 1916, 1917, 1918 and 1919, in concrete figures, together with the total number of consumers, from 1915 to 1919, as of December 31st?
A. Yes.

1295 *Gas Produced and Purchased During* 1916, 1917, 1918, 1919.

1916.

45,788,609,000	Hope Natural Gas Company.
16,197,571,000	Cuyahoga County Field.
2,508,263,000	Wooster Field.
168,517,000	Other Wells.
64,662,960,000	Total.

1917.

43,290,476,000	Hope Natural Gas Company.
8,467,073,000	Cuyahoga County Field.
3,359,928,000	Wooster.
312,279,000	Other Wells.
55,429,756,000	Total.

1918.

36,620,243,000	Hope Natural Gas Company.
7,749,942,000	Cuyahoga County Field.
4,433,504,000	Wooster.
102,260,000	Uhrichsville District.
27,705,000	Mohican.
26,284,000	Cadiz Field.
4,980,000	Dover Field.
131,189,000	Other Wells.
49,096,107,000	Total.

1296

1919.

32,841,102,000	Hope Natural Gas Company.
7,087,420,000	Cuyahoga County Field.
3,184,989,000	Wooster Field.
31,508,000	Uhrichsville District.
457,595,000	Mohican.
250,288,000	Cadiz Field.
116,009,000	Other Wells.
43,968,911,000	Total.

1917	shows	14.3%	decrease	in	gas	supply	over	1916.
1918	"	11.5%	"	"	"	"	"	1917.
1919	"	10.2%	"	"	"	"	"	1918.
1919	"	32.0%	"	"	"	"	"	1916.

Total Number of Consumers.

1915 (as of December 31st)	264,773
1916	289,944
1917	309,761
1918	309,028
1919	328,937
Plus 19,000 meters not read, equals	350,000

1297 Q. Now, especially in times of shortage of supply, would those consumers nearest your wells or source of supply have the better service?

A. Yes, that would naturally follow. They would take the gas out first.

Q. Can you give us the mileage of your pipe line system?

A. We have in our transportation system approximately 860 miles. That is the main line system, I am speaking of. That does not include the gathering lines in the fields. In the towns and cities for the distributing systems, we have approximately 3,000 miles, making a total of 3,800 miles. That does not include anything below two inches; that is carrying it from three inches up to twenty inches.

If we added the smaller pipe, it probably would increase that mileage 300 miles.

Q. Now, from your Ohio Exhibit No. 1, give the extent of your company's main lines and connecting lines that were designed, constructed and are being operated for the purpose of transporting and distributing gas obtained through the Hope Natural Gas Company from West Virginia.

Mr. Hoffheimer: Objected to, as calling for an opinion or conclusion of the witness, and as incompetent, irrelevant and immaterial.

1298 The Commissioner: Note the objection.

A. These pipe lines, with the exception of the Imperial line running from Youngstown to the southeasterly corner of Mahoning County, being an 8-inch pipe, and the pipe line running from Ashland County to Barberton, a 12-inch pipe line, were all constructed with a view of bringing gas from West Virginia and distributing and delivering it to the various municipalities. The line known as the Imperial line was formerly bringing gas from Pennsylvania. That is no longer available. The quantity was very small. A line from Loudonville to Barberton is transporting gas now from our producing fields. Otherwise, all the pipe lines were constructed with a view of transporting gas from the West Virginia fields.

Q. If you know, state when the pipe lines of the Hope Natural Gas Company were constructed over to the Ohio River and connected with your company's lines in Monroe and Belmont Counties.

A. The first pipe line designated as No. 1 10-inch pipe on the exhibit was connected with the Ohio River about October, 1899. Do you want the rest of the pipe lines as they were constructed?

Q. Yes, if you please.

1299 A. Pipe line No. 2, the 18-inch line, was connected about September, 1903. Pipe line No. 3, 18-inch, was connected about January, 1908. The first division of pipe line No. 4, 18-inch, was connected some time during the fall of 1915; I don't recall just the month. That is the first and second division of No. 4; that was laid in 1910 instead of 1915. That was completed in 1915, then No. 5 was connected at the Ohio River in 1912. No. 5 was a 20-inch pipe line. It was completed in 1913—the first and second division—that is when the connection took place at the Ohio River. And the third division was connected at the lower end, but was not completed for nearly five years after it was first started, but it was carrying gas part of the way.

Q. You may state whether or not it is a fact that when the East Ohio Gas Company would construct its lines 1, 2, 3, 4 and 5 from the river northwardly, as you have described, the Hope Natural Gas Company, on the West Virginia side of the river, would construct a line or lines from its system, perhaps Hastings Station, northwardly to the river, and connect with your lines, having with your company a unity of purpose of transporting West Virginia gas into Ohio for distribution to your consumers?

1300 Mr. Hoffheimer: Objected to, first, as leading; second, as calling for an opinion and conclusion of the witness; third, because no proper foundation has been laid; and fourth, because it is incompetent, irrelevant and immaterial.

The Commissioner: Note the objection and let the witness answer.

A. The investment in each instance was made after the East Ohio Company had received the assurance of the Hope Natural Gas Company that it had an adequate supply of gas and would lay additional transportation lines of sufficient size to transport the quantity of gas desired, up to the full capacity of the pipe lines that the East Ohio Company constructed.

Mr. Hoffheimer: I move to strike out the answer, on the grounds stated in the objection, also in so far as it relates to information from the Hope Natural Gas Company, as hearsay, and also because the answer is not responsive to the question.

The Commissioner: Note the motion.

An adjournment was here taken until Friday, July 9, 1920, at 10 o'clock, a. m.

ORIGINAL, # 20 & #21.

October Term, 1920.

COMMONWEALTH OF PENNSYLVANIA

vs.

STATE OF WEST VIRGINIA.

STATE OF OHIO

vs.

STATE OF WEST VIRGINIA.

Proceedings of Friday, July 9, 1920.

1301 And now, Friday, July 9, 1920, the hour of 10 o'clock a. m., having arrived, hearing resumed pursuant to adjournment.

MARTIN B. DALY resumes the stand.

Direct examination (continued).

Mr. Eagleson:

Q. Mr. Daly, when we adjourned last evening, you were testifying as to the purpose of the investment made by your company in the plant, as evidenced by your exhibit here, and I now want to ask you if you have had any recent valuation made of your plant, property and facilities?

A. We had a thorough inventory made and a valuation placed on our properties, I think it was as of December 31, 1917. It has since that time been brought down to date, but it has not been reported yet. I have the valuation as of the date that the inventory was completed.

Q. And what was that valuation, please, as of that date?

A. In round numbers, $47,000,000, physical valuation. That did not include any good will, franchise value or government bonds, nothing but physical property. I want to say that valuation was not based on the increased value of material at that time. It was
1302 based on the pre-war prices—practically 1914 prices.

Q. What is your present capital stock outstanding?

A. $38,000,000; that is in round numbers. There are a few thousand dollars in excess of that, but I don't recall them.

Q. To the value as of December 31, 1917, state whether or not there has since that time been additions and betterments made to the plant value.

A. There have been a number of field additions in the way of field lines and betterments of that kind, but I am not prepared to tell you the amount.

Q. That would include line extensions, new wells and natural demands for maintaining the business?

A. Yes, new wells, however, are not charged to investment, except the material in the well. The drilling of the well is not charged to investment.

Q. That would be charged to what?

A. Expenses—operating expenses.

Q. Calling your attention to the pump stations or compressing stations on your system, Mr. Daly, what number are there?

A. We have only two.

Q. And what are their locations?

A. There is one located near the town of Shreve, in Wayne
1303 County, known as the Shreve station, and there is another in Cuyahoga County, known as the Berea station.

Q. Take the station in Wayne County, known as the Shreve station, designated on your Ohio Exhibit No. 1, and tell us when it was constructed, its cost of construction and its function?

A. It was completed last year. It is not a large station; it cost approximately $125,000 for the station alone. Its function is to gather gas from the low pressure territory in Wayne County in the vicinity of Shreve.

Q. What horse power is that station at Shreve, if you know?

A. I don't know.

Q. And the gas taken in at the Shreve station is delivered into your main lines where?

A. It is delivered into the main line that extends from Loudonville to Akron, described as a 12-inch line, running through from the southwestern corner of Wayne County to Summit County, and to the city limits of Akron.

Q. Now, give us a like description of the other station you mentioned, known as Berea Station, up in Cuyahoga County.

A. That station was constructed for the purpose of gathering gas from what is known as the Cuyahoga Field, and I believe one or two wells over in the easterly portion of Marion County. On account of the competition there between three or four gas companies
1304 operating that field, the pressure has been reduced very much and it became necessary for all the companies to install stations, for the purpose of getting the gas out; that is, the rock pressure was not sufficiently high to force the gas into the main lines against the pressure we were obliged to carry, in order to give a delivery of gas to Cleveland from that field.

Q. When was this last mentioned station completed?

A. It has been in operation about two years.

Q. Are the competitive conditions for the procurement of gas leases and gas in Ohio intense or otherwise?

A. Well, to describe it mildly, our competitors are very active. I wouldn't say that we are, but we are doing the best we can to keep our portion of it, but there are four companies that are very active in that Ohio field—the Medina Company, the Ohio Cities Company, the Ohio Fuel Supply Company and the Logan Natural Gas Company, and the East Ohio, making five in all.

Q. I call your attention to a legend on this Ohio Exhibit No. 1, down in Harrison County, marked "Cadiz Station." Is that a station or not?

A. That is a station that is now under construction; it is not in operation yet.

Q. And what is the purpose and function of that station?

1305 A. There is a small field in Harrison County. We purchase gas from some of the wells in that vicinity, and we have drilled some wells, but they are very small and low rock pressure, and it is necessary to have a compressing station there, in order to boost the gas high enough to put it into the main lines.

Q. What will be the cost of that station?

A. That station will cost approximately $150,000.

Q. I wish you would state briefly the advantages, if any, of natural gas for domestic or other purposes, as compared with coal or other fuels?

A. The principal advantage, of course, is its low cost, as compared with other gaseous fuel, its convenience, its cleanliness, and its advantage, when an adequate supply can be given, to the health of the community, by the ability to keep an even temperature at all times. It is a commodity that might be described as a luxury within the reach of the poor as well as the rich, and has probably contributed more to the comfort of the laboring classes and people of medium resources than any other fuel. It has saved a great deal of drudgery in that way, and has contributed to the comfort of the people. It has also been a great contributory in the way of taxation to the communities. Not only in that way has it saved the community, but in the saving to cities of a large amount of

1306 money in the gathering and disposing of ash content. In the City of Cleveland alone, in the year 1917, the East Ohio Gas Company displaced approximately thirteen hundred thousand tons of coal. The ash content of that coal would be approximately eight per cent, which would be about 185,000 tons of ash. There is about 1¾ cubic yards in that, and the cost of handling a cubic yard of ashes under present conditions is $1.25, about, so it means a saving to that community of approximately $130,000 a year. It would require approximately 16,000 coal cars of 80 tons each to transport that coal to Cleveland. It would require nearly 500,000 truck loads over the paving to deliver the coal to the consumer, so that the indirect benefit to the municipalities is very great. Then we have charitable institutions and hospitals, where it is almost a necessity. They find it very difficult to get along without some fuel of that kind, and in the smaller communities, the cutting off of natural gas would mean that they would be deprived of all gaseous fuel, for the reason that they are not large enough to maintain

an artificial gas plant. Even though the company could furnish gas, the cost would be very excessive in comparison with natural gas, and it would be unthinkable to tax the people to the extent necessary to use artificial gas for heating purposes, although
1307 they might afford the luxury of it for cooking and water heating.

Q. What about the element of the smoke that would be incidental to the consumption of coal, as against gas, in a city like Cleveland, for instance,—that is, as to inconvenience and damage?

A. Well, that is an item that is so broad in its nature and so complicated it would be very hard to estimate, because you have got to go into the painting of houses and decorations—interior decorations,—and you have to consider the dirt and dust occasioned by the use of coal, which would run into the millions of dollars.

Q. That would augment the inconvenience, if not the peril, of domestic help?

A. I don't know much about that feature of it, but it is impossible to hire domestics now in houses that have no natural gas. We have approximately fifteen or eighteen thousand homes altogether in Cleveland that have no gas, and that is one of the complaints they have to make, that it is impossible for them to keep help. It would also discourage the building of new homes in the territory where there is no gas at the present time.

Q. There would be, would there not, some difference between living in the manner you have described in Pittsburgh, for instance, in the days of Pittsburgh's exclusive use of coal, and
1308 in Cleveland in her best natural gas days?

A. Well, having lived in Pittsburgh before they had natural gas, I believe that might be compared to Rip Van Winkle going to sleep and then waking up in Heaven.

Q. Mr. Daly, if, under the provisions of the statute in question in this proceeding, the Hope Natural Gas Company were compelled to divert to new or other persons, firms or corporations in West Virginia, than it now serves, a material amount of gas which it has been and is now furnishing to your company for distribution, what would be the effect thereof on the operation of your company, and especially in the cold day periods of the year?

Mr. Steptoe: The question is objected to as calling for an opinion or conclusion of the witness touching matters in futuro, as calling for an answer purely speculative, and involving various elements which cannot be embraced fairly in one answer; and as otherwise irrelevant, immaterial and improper; and in addition, the question is objectionable, as calling for the construction of the statute on the part of the witness not justified by the statute, and as being predicated upon a construction of the statute not authorized by its
1309 language.

By the Commissioner: Note the objection and let the witness answer.

A. Any act on the West Virginia authorities that would decrease our present supply would naturally affect the domestic user of gas,

inasmuch as we are now facing a shortage of 75,000,000 feet per day, so that any additional amount that might be taken away from the Hope Natural Gas Company would affect our supply to that extent. It is our only source of supply, outside of a small production in Ohio, which we have been unable to increase, notwithstanding active operations and diligent work on the part of the company all the time, seeking an adequate supply there.

Mr. Eagleson:

Q. As I understand your testimony yesterday, your supply consists of the amount of Ohio gas, which you purchase, and the amount of Ohio gas which you produce, and in addition to that, your only other source of supply is the Hope Natural Gas Company?

A. That is correct.

Q. And that even under those conditions and obtaining
1310 the gas from the Hope Natural Gas Company, pursuant to your contract with its prior rights for domestic purposes, as you have been receiving it, you have, during the winters past, been confronted with serious gas shortages, even for domestic consumption?

A. Yes, sir, we have had very serious shortages—so serious that for a number of days and in one instance extending over a period of nearly three weeks, there were many people who could not obtain sufficient gas to cook their meals with.

Q. Under those circumstances then, if the authorities in West Virginia, pursuant to the Act in question here, were to divert to persons, firms or corporations in West Virginia for the service of the public, or any part of the public, for all purposes, in the State of West Virginia, a substantial amount of the gas that otherwise would come through the Hope Natural Gas Company's lines to your company, what effect, if any, would that have with reference to the disorganizing and breaking down or destroying the operation of your company?

Mr. Steptoe: Objected to, for the same reasons assigned in the last objection.

The Commissioner: Enter the objection and let the witness
1311 answer.

A. The result of such an action, in so far as we are able to anticipate it, would be the wreckage—practical financial wreckage of the company. It would result in depriving many of the communities of gas service of any kind. It would leave our transportation system without any reason or any practical use to which it could be applied. That alone would involve a loss of approximately $20,000,000, less whatever salvage might be obtained from it. As our main lines are very large—18 to 20 inches in diameter——

Q. Confine yourself to the question for the moment, please, with regard to the extent of the wreckage on your company's service, and the effect on your consumers.

Mr. Steptoe: Objected to for the same reasons as given before.
The Commissioner: Note the objection.

A. The effect on our gas consumers would be that they would be obliged to discontinue natural gas altogether. That must be the ultimate result.

1312 Mr. Eagleson:

Q. Now, you spoke of the result of such an act on the part of the authorities of West Virginia upon your physical property values. You may state more in detail, if you desire, what that result would be.

Mr. Blue: The State of West Virginia objects to this question, for reasons already assigned in the objections previously noted.
The Commissioner: Note the objection.

A. Financially the company must use its investment in its transportation system, for the reason that those pipe lines are constructed for the purpose of carrying very large quantities of gas, and if that quantity is not available, the system becomes useless. The pipes are very large and are not in demand for any other purpose, nor can they be used for any other purpose. We have but one pipe line that might be taken up and realize any profit over the cost of taking it up.
Q. What line would that be?
A. That would be the No. 1 line, 10 and 12 inch pipe. The 18 and 20 inch pipe would not be marketable.
Q. That would mean that the main transportation lines of
1313 your company from the Ohio River, in Monroe and Belmont Counties, northward to the lake, would be rendered to what extent useless?
A. I should say the entire investment would be lost.
Q. I believe you stated yesterday that with the exception of the distributing company in Mahoning County, which I will term the Youngstown District, and the distributing system down in Knox County, Ohio, practically your entire system was designed, constructed and is being maintained for the purpose of receiving and distributing natural gas received from the Hope Natural Gas Company, to Ohio consumers?

Mr. Steptoe: Objected to, for the reasons assigned to similar questions on prior examination.
The Commissioner: Note the objection and take the answer.

A. Yes, sir, that is correct.

Mr. Eagleson:

Q. Under what arrangement or form of contract does your company deliver gas to the various municipalities in Ohio, to which you have referred?

1314 A. The contracts with the municipalities?

Q. Yes; what contractual relationship, if any, with the various municipalities have you, under which you supply to the consumers therein natural gas? I might state that an ordinance is a contract, within the meaning of the question.

A. We are under contractual relations with all the municipalities for certain periods of years, to sell gas at prices fixed in the ordinances. The number of years is generally fixed by the Council and not exceeding ten.

Q. The council in Ohio passes an ordinance under Section 3982 of our General Code, and the company accepts it, if it does accept it, under Section 3983, which constitutes, as the statute states, a contract: Is that the fact?

A. I assume that the numbers are correct. That is the fact as to making a contract.

Q. And generally speaking, have you many of those contracts so made, that are now in force and effect, and will be for a number of years?

A. We have a large number; some of them will expire within the next year or two, but we are not so certain but we would be obliged to enter into a contract whether we desire to or not. It is probably a matter for the Public Utilities Commission to decide—and
1315 the courts. At any rate, we are desirous of keeping up the service as long as possible, so long as an adequate supply of natural gas is obtainable.

Mr. Steptoe: Counsel for West Virginia object to the foregoing question and answer, and moves to strike out the same, in so far as they undertake to limit the power and authority of the State of West Virginia under the statute in question, by contracts of the character referred to.

The Commissioner: Note the objection and motion, and let the examination proceed.

Cross-examination.

Mr. Steptoe:

Q. On what date was your line No. 1 completed to the Ohio River at Round Bottom?

A. It was started at the Ohio River some time in 1898. That was before my connection with the company. It was laid as far north as the City of Akron during that year.

Q. On what date did your company commence the service of natural gas in the town or city of Akron?

A. That was the latter part of May, 1898. I haven't the
1316 date.

Q. Prior to that date was Akron served with natural gas and to what extent?

A. No, sir, it was not.

Q. Not at all?

A. No. I would like to state that I am familiar with that, because

I went to Akron and made a survey of the town as an engineer of the company.

Q. What fuel was theretofore used in Akron?

A. Coal, I think, altogether—coal and wood.

Q. Was there any artificial gas used?

A. Yes, sir.

Q. Was there an artificial gas plant and equipment for service of artificial gas to the people of the city?

A. Yes.

Q. What became of that artificial gas plant?

A. That is owned by the Akron Gas Company, and later on was leased to the Mohican Oil & Gas Company at an annual rental, and natural gas was substituted in the Akron Gas plant for artificial gas. Later the Mohican Gas Company was purchased by the East Ohio Gas Company, and the East Ohio assumed the lease of the Akron Gas Company.

Q. Do I understand that the natural gas service by your company to the City of Akron is at present through the plant or distributing system of the old artificial gas plant?

1317 A. Not altogether. Their plant would probably take care of about one-sixth of the number of consumers. Akron, since that time, has extended, and all the extensions that were made were made by the East Ohio Gas Company.

Q. In other words, the extensions to fit the city's growth have been made by your company?

A. In addition to the plant that was installed by the East Ohio Company at the time the artificial gas company was in operation.

Q. What was this Mohican Company which your company acquired? Was it a producer of natural gas?

A. It was a producer, transporter and distributor of natural gas.

Q. From what field?

A. From the field known as Knox and Wayne County fields, from which gas is still being produced, that field having been extended and developed by the East Ohio Company after the purchase of the Mohican Company, which was not in a position to give an adequate supply, on account of not having found the gas that we afterwards discovered.

Q. So it is a fact that the Mohican Company entered Akron and leased the artificial plant after your company had entered the town for the service of natural gas?

A. That is true.

1318 Q. And subsequently your company took over the Mohican Company, together with the artificial plant then leased to the latter company?

A. Yes, we assumed the lease.

Q. Prior to the introduction of natural gas into Akron, were the houses of the residents there equipped for the use of this artificial gas?

A. I assumed they were, to the extent that artificial gas could be used for domestic purposes, such as cooking and lighting. That applied, of course, to a limited number; not to the entire popula-

tion, because the average household did not use gas in that period to any great extent. Probably 50 per cent would be a fair estimate. Many of them used it for lighting only.

Q. That is, 50 per cent of the then population?

A. Yes, of the then population.

Q. Is it feasible or practicable to use that portion of the equipment which supplied artificial gas in connection with the later service of natural gas?

A. Yes.

Q. That is, the same old equipment of the houses were used to the extent that the houses were furnished?

A. The same equipment, with the same amount of gas, would be sufficient. It was necessary, in order to give the in-
1319 creased amount of gas to increase the service pipes, the size from the main to the house. It was also necessary to change the form of cookstoves. Under ordinances that existed at that time, and have not been changed, it was necessary to use natural gas in closed-top ranges and artificial gas was used in open-top ranges, so that in each instance where there was a conversion made from artificial to natural gas, those changes had to be made. To that extent, the artificial appliances were used. It was also necessary to change the lighting fixtures from an open flame to an incandescent flame. At that time the open flame with a bat-wing burner was used for artificial gas. Each artificial gas contract required a certain candle power. That has all been changed now, and the recognized heat unit is the value in gas, and they are using almost exclusively the heat unit in making contracts and the incandescent burner is being used, instead of the open flame.

Q. Those were the necessary changes from artificial gas service to natural gas service?

A. Yes, sir, and the installation into the system of regulators for the reduction of pressures from the high to the low pressure, which was not necessary in the manufactured gas, because they started with a low pressure and the quantity being much
1320 less, they had no difficulty in distributing the gas.

Q. When did your company first start with the service of the City of Canton?

A. In the same year, 1898.

Q. Was that city theretofore served with natural gas?

A. No, there was no natural gas there that I have any record of.

Q. Did you find somewhat similar conditions at Canton, with reference to artificial gas?

A. Yes, sir.

Q. Was the artificial gas plant there acquired by your company and used?

A. No, sir.

Q. No portion of it?

A. We purchased some of the pipes later on out of their main lines; that was long after they had abandoned the plant. The same company that operated the artificial plant engaged in the electric business, and naturally being in competition with them-

selves, the lighting business grew less, while the electric business increased, and to that extent the artificial gas plant was retired with that business, as it is in nearly all communities where electric plants are installed.

1321 Q. Its mains and distributing system were acquired and used to some extent by your company?

A. To a very small extent. We had a very small plant there. We used their plant to the extent of about $20,000, as I recall it now.

Q. Both Canton and Akron have electric light plants?

A. Yes.

Q. Is the electricity used to any considerable extent for the lighting of houses?

A. Well, I assume it is. I have no personal knowledge of that.

Q. Did your company acquire the franchises of the old artificial gas company, in either Akron or Canton?

A. Well, as lessee, we operated under their—that is, we have whatever rights they have in the streets, or had. We place no value on them, however.

Q. When did your pipe lines first reach the City of Cleveland and gas service to that city commence?

A. That service began in January, 1903, as I fix the date now, it was January 1, 1903, that gas was turned on in the City of Cleveland. Its distribution and use began in a very few days after that.

Q. Was there any service of natural gas to Cleveland prior to that time?

1322 A. There was no service.

Q. With reference to each of the three cities we have been speaking of, Canton, Akron and Cleveland, you did not, of course, in any instance, start out with a service of the entire community; it was a matter of gradual extension, was it not?

A. Well, I think the towns were pretty thoroughly piped—that is, Akron and Canton. Of course, Cleveland was a kind of gradual development as the supply of gas increased and the available supply increased, and we continued to extend our plant.

Q. You say Canton and Akron are pretty well piped. What piping do you refer to—artificial gas piping?

A. No, I refer to the natural. I think they were both thoroughly piped at the time the company entered there. They attempted to take care of the greater portion of the town.

Q. Did your company acquire from any other utilities in Cleveland artificial gas plants or systems of distribution?

A. In the year 1909, there was a merger of the East Ohio, the Cleveland Gas, Light & Coal Company, and the Peoples Gas, Light. That was merged into the Consolidated East Ohio Gas Company. The Columbia Gas Company and its interests owned the

1323 Cleveland interests. Their names are now being used by the East Ohio Gas Company largely for the distribution of natural gas.

Q. Was that merger in the year 1909?

A. July 1, 1909.

Q. What Columbia Company do you refer to?

A. The Columbia Company is a holding company.

Q. It is the Columbia Gas & Electric Company, of Cincinnati, that you refer to?

A. Yes.

Q. One of the companies that some testimony has been given about in this case, as the holding company of the United Fuel Gas Company and others?

A. I am not familiar with the testimony. It has, however, no interest in the East Ohio Natural Gas Company now.

Q. What was the business of those companies taken over in that merger?

A. They were selling artificial gas.

Q. Confined to the City of Cleveland?

A. Yes, and its suburbs.

Q. I suppose you acquired that with the territory, franchises, and consumers of those companies?

A. They had no territory, as we understand territory.

Q. I meant, service territory, Mr. Daly?

1324 A. Yes, sir.

Q. Did that result in the extension of your service to any extent?

A. Yes, sir; that resulted in our using the mains of the artificial gas company for extending our service. That was made possible by our being able to purchase from the Hope Natural Gas Company an additional supply of gas and lay some new pipe line and we gave a service to the people of natural gas where they had formerly used artificial.

Q. Could you approximate the number of additional consumers reached and supplied with natural gas in that manner?

A. I could not. Those conversions took place from year to year. People in the artificial gas district, especially after the merger of the companies, insisted that they should have the right to use natural gas, and they were very persistent in it, so that we were obliged to change over, and having a good supply of gas, we were glad to change over to those mains—to convert those mains to the transportation of natural gas. That took place from year to year, and the town kept growing and so I would be unable to state, without careful computation, and I don't think I could do that, and arrive at even an approximate estimate. I believe that the artificial gas had at the time some ten or twelve thousand connections only.

1325 Q. You made that increase by an additional contract with the Hope Natural Gas Company for an additional supply of gas, do I understand?

A. The Hope Natural Gas Company supplied the gas, and of course we had their assurance that they had the gas, and we had a contract with the Hope Natural Gas Company prior to that time to supply all of the gas required for the domestic needs of the customers of the East Ohio Gas Company.

Q. Additional lines were laid both by your company and by the Hope Natural Gas Company to take care of that increase?

A. Yes, sir.

Q. Those would be lines Nos. 4 and 5 on your map, Ohio Exhibit 1?

A. Well, No. 5 was not laid until 1915. We had at the time Nos. 1, 2, 3 and 4. No. 4 was completed in 1912; it was started in 1910. The population of the city increased in the meantime very materially.

Q. As a matter of fact, the increase of Cleveland's population has been what, in the last decade—I mean, the percentage.

A. I can't give the percentage. It has increased in the past ten years 240,000.

Q. And Akron has more than doubled?

1326 A. Yes, sir.

Q. And Canton?

A. Canton has had a very material increase.

Q. You referred to furnishing some artificial gas following the merger. How long did you continue to furnish artificial gas?

A. We are still furnishing artificial gas in limited quantities.

Q. To approximately how many of your consumers?

A. I can't tell you that. I would place that probably at ten or twelve thousand. It increased very materially.

Q. I understood you to say that the former users of artificial gas insisted upon the service of natural gas?

A. Yes, sir.

Q. What change then did you make? For what purposes have you been serving artificial gas?

A. Well, the natural increase in building has kept up practically the same number. For instance, Cleveland Heights and Euclid Heights and East Cleveland and a portion of Lakewood, we are supplying artificial gas in some localities where they haven't natural gas at all, and in a number of instances we are not supplying either. I will not make that as a positive statement, but the quantity of gas sold is approximately the same as it was in 1910. As to the number of consumers, I would like to reserve the privilege of cor-

1327 recting that.

Q. Aside from revenue acquired from the artificial gas plant now being operated by your company in Cleveland, what other sources of income are there on the sale of natural gas?

A. We have a small revenue from gasoline—very small, probably from two hundred to three hundred gallons a day. That varies. and we are very small oil producers,—I think about thirty barrels per day.

Q. Then your oil and gasoline production and your artificial gas plant in Cleveland are your only sources of revenue other than the sale of natural gas?

A. That is correct.

Q. Did I understand you to say that your main transmission lines from the Ohio River, shown upon your map, Ohio Exhibit 1, are useful only for the transportation of natural gas?

A. That is correct.

Q. There is no present prospect of their being usable for any other purpose?

A. No, sir.

Q. As far as you know, there is no other possible use for them?

A. No, I don't think there is any other practical use for that pipe.

Q. You have referred rather frequently to contracts be-
1328 tween the East Ohio Gas Company and the Hope Natural Gas Company for the sale and delivery of gas at the Ohio River. There is but one contract so far produced, that bearing the date of May 1, 1910. Were there contracts in writing prior to that time?

A. I do not think so; I never saw one. There was an understanding evidently, but if there was such a contract in writing, I am not familiar with it; I have never seen it.

Q. In reference to those contracts that you have for the service of the various municipalities of Ohio, did I understand you to say that you are obligated to deliver for municipal service natural gas under those ordinances or contracts?

A. To the extent of the ability of the company to obtain it, yes.

Q. It is obligatory upon you only to the extent of your ability?

A. Yes, I think so.

Q. Is that saving clause provided in each and every of the contracts?

A. I wouldn't say that it is in any of the contracts.

Q. Whether inserted in words or not, it is understood that that is the limit of your obligation and liability?

A. That is as I understand it.

1329 Q. I presume that what you have said touching the artificial gas plants in Canton, Akron and Cleveland, and the acquisition and use of the same in the distribution of natural gas by your company, applies to others of the important towns which you serve?

A. No, sir, it does not—no other towns.

Q. Those are the three only towns?

A. Yes, sir.

Q. None of the others had artificial plants?

A. No; I wouldn't say that. Youngstown has an artificial plant; so has Warren; but we have no interest in them—the East Ohio has no interest in them.

Q. There are artificial plants in both Youngstown and Warren, and now doing business?

A. They are doing a small business. Warren, in connection with supplying gas for making incandescent lamps, to which natural gas is not applicable. Youngstown is doing a small lighting business; I don't know to what extent.

Q. Do they all have electric plants for the furnishing of light?

A. Yes.

Q. Are there any other towns other than the ones you have mentioned, where there are gas plants or electric plants, for the furnishing of heat and light?

A. No other that I have any knowledge of.

1330 Q. In what counties of those shown upon your map, Ohio Exhibit No. 1, is natural gas produced?

A. Natural gas is produced in Knox, Ashland, Wayne, Madison, Cuyahoga and Harrison, in some quantities. Some of them are very small quantities and in others the production is greater. Cuyahoga has produced a large amount of gas. It is very low now. Knox and Wayne Counties are producing gas at the present time, but not in any great quantities, so far as the East Ohio Company's holdings in those counties go, they are very small. Other companies have been operating there for a number of years.

Q. In what sands is the gas found in those counties you have mentioned, and at what depth?

A. The principal source of supply is found in the Clinton sand. The depth of that sand in Cuyahoga County would be about 2800 feet. The sand dips to the south at the rate of about 50 feet per mile, so that when you get to Knox County, it would probably be 3000 feet deep. There is another formation known as the Newburgh sand, in which we occasionally get a well. That sand is very short-lived—produces a large volume of gas for a short time and then plays out. The Clinton formation is very spotty, and

1331 we sometimes have to drill a number of wells to get one good one. It makes it an expensive operating proposition.

Q. Have any wells been drilled, tests made, for natural gas in the other counties shown on this map, not mentioned by you as having heretofore produced gas?

A. I don't think there are any of them that have drilled a large number of wells. In Tuscararawas County there have been probably twenty-five dry holes drilled within the last two years. No paying producer has been found. In Stark County, wells have been drilled without any result. Portage County has also drilled. Trumbull and Mahoning Counties, both at one time, had a small production, but that was exhausted years ago. I am not familiar with Holmes County, but I think that just south of the northerly line of Holmes County there has been some drilling done, with the usual result of one producing well for two or three dry holes. However, they have not been able to trace that field to any great extent beyond the north line. In Belmont County there has been some drilling done. That is far east of our lines, and small producers only. That gas is being piped into West Virginia.

Q. How about the Counties of Carroll and the space in between Clarington and Youngstown on your map? Has there been any experimental work done in there?

A. There has been some work done in there, but I am not familiar with it. I know that it has not resulted in any very extensive field, nor any profitable field. I believe the West Virginia Gas Company drilled some wells in there, from which they ob-

1332 tained a supply of gas for Salem, Ohio, but they are all small wells.

Q. Has there been any deeper drilling, or is the Clinton sand the deepest known sand in that section?

A. No, the Trenton rock is a deeper sand. That sand is the formation in which gas was found in Wood and Hancock Counties a number of years ago. Tests to the east, with the exception of a few small wells, found in Lucas County, near Toledo, have not been productive of any result. There have been a number of wells drilled to the Trenton rock, and in some instances they have gone five or six hundred feet into that rock, without obtaining any gas supply. Those are the only deep tests that have been made in Ohio. The attempt to locate gas in the Trenton rock, I mean, and they have been unsuccessful.

Q. The fields that you have mentioned are, as I understand you, not available for any additional supply to your company and are practically played out?

A. That is the situation.

Q. In your figures yesterday, you gave us the amounts of gas purchased from the Hope Natural Gas Company, amounts purchased from other companies, and the amount of your own production, from 1915 to 1919, both exclusive. In order to be consistent with
1333 the figures asked of and delivered by the other companies, would you supply us with like data for the years 1910 to 1914, both inclusive?

A. I will be very glad to get it for you, but I haven't got it here.

Q. Would you also, from figures or data in your possession now, or to which you can obtain access later, furnish us with a statement of the sales by the East Ohio Gas Company, from 1910 to date, separating the same so as to show the number of domestic consumers, the number of industrial consumers, and the amounts sold to each class of consumers, from 1910 to date?

A. Yes, I may be able to give you that.

Q. I would like also to have a statement showing the acreage developed and undeveloped, and the number of wells annually, from the year 1910 to date.

A. I will try to get that for you.

Q. In what cities or at what points does the East Ohio Gas Company furnish or sell natural gas for industrial purposes?

A. Our principal demand for industrial purposes has been in Cleveland, Akron, Canton, Youngstown and Massillon.

1334 Q. Will you give us a statement in general terms of the nature of the industries furnished?

A. Since 1916, the industries furnished have been largely in the making of steel. Many of those industries were furnished under orders from the Federal Fuel Administration.

Q. Are you still supplying those steel plants?

A. We supply them gas for small users at domestic rates only. Last year our sales for all industrials amounted to three hundred and twenty-three millions, but there was no special rate gas sold since 1916.

Q. What are the industries since 1916, besides steel manufactures?

A. The rubber industry in Akron uses gas for certain purposes,

but not in very large quantities. The automobile industry uses gas for brazing and welding, and things of that kind.

Q. Before you leave that, will you tell us how much the rubber industry is using?

A. I couldn't tell you.

Q. Is there any gas furnished for glass plants?

A. None.

Q. In a general way, you would say that the purpose for which industrial gas is now being supplied by your company and
1335 has been supplied since 1916, is in the steel industry, in the labor industry, automobiles and some smaller scattered industries, I suppose.

A. Yes; and that is supplied only during the summer months. We sell no gas for industrial uses during the winter months, and have sold no gas, except under orders from the Fuel Administration.

Q. What character of industries did you supply in the pre-war period back of 1910?

A. Well, from 1910 on up to '16, gas for industrial uses was supplied to almost any and all that wanted to use it. During that period, the Lakewood field came in, and that was a gas produced by so many individuals that had no market for it, that we were obliged to make a market for it in Cleveland, and we sold it for all purposes.

Q. Did you supply, among those, glass plants?

A. No glass plants. We have no glass plants in Cleveland.

Q. Well, as a matter of fact, it was not so of the Lakewood field only, but you did furnish gas for general industrial purposes before Lakewood was discovered, and up until 1916, did you not?

A. During the warm weather, or whenever we had an amount of gas not required by the domestic users. We at all times gave preference to the domestic user, and our contract provides
1336 for discontinuance without notice to the industrial users.

Q. I understand your rule, as between industrial and domestic consumers; but I wanted to know if you did not, as a matter of fact, serve industrials generally of that surplus, over and above domestic?

A. Yes.

Q. Was the gas which you purchased and took over from the Lakewood field served for all industrial purposes generally?

A. No. The gas produced from the Lakewood field practically took care of all purposes in Cleveland.

Q. In other words, it was commingled with the other gas and furnished indiscriminately?

A. Yes.

Q. The amount of gas furnished during the years the Lakewood field was producing to any extent, along with the amounts of your further supply furnished, will appear on this statement you have promised us?

A. Yes; parts of it are already in evidence.

Here a recess was taken until 1:30 o'clock, P. M.

1337 Friday Afternoon, July 9, 1920.

And now, the hour of 1:30 o'clock P. M., having arrived, hearing resumed, pursuant to adjournment.

M. B. DALY resumes the stand.

Cross-examination (continued).

Mr. Steptoe:

Q. I forgot to ask you, in connection with the equipment of the houses in the principal towns you serve, if their heating is done principally by furnaces?

A. Well, in the new homes, the heating is done very largely by furnaces. In the older homes, they didn't have furnaces, they heated by stoves. In many instances, in the smaller residences, they depend on the cookstove,—where there are two or three families living in one house, with two or three kitchens, they depend on the cookstove very largely for heating. In that case they use gas in a converted coal stove, and depend upon it for heating purposes.

Q. Where furnaces are used, what is the character of the heating of the house,—steam or hot water?

1338 A. The great majority would be hot air.

Q. Are those furnaces so constructed as to use either coal or gas as the occasion might require?

A. In the majority of cases, I believe the coal furnace was converted to a gas furnace, simply by placing a burner in the fire-box of the coal furnace. There are a large number of gas furnaces in connection with coal furnaces. Those furnaces were installed for the purpose of caring for heating in case of shortage of gas. Of course that does not apply except to a small percentage of the homes, because it makes a double investment. There are a number of homes that were built, and only a gas furnace installed. That, however, was against our advice, whenever we were asked about it.

Q. As a matter of fact, the approved furnace is interchangeable from coal to gas?

A. I don't know of any such furnace, except a combination furnace with two firepots. Any furnace that is interchangeable is naturally wasteful.

Q. Maybe I didn't make myself clear. I refer now to those furnaces where gas can be used, or if gas is short, coal can be substituted?

A. By taking the burner out; yes.

Q. That is the approved form of furnace and the one you

1339 recommend to your consumers?

A. No, sir, we would not recommend that method of installation for gas serving, because they will insist on using the gas so long that they take it all away from us and get us flat on our

backs, so far as the supply is concerned. The result is that everybody is short of gas. We do not approve of a coal furnace being converted to gas. That was very well when we had a large surplus of gas. We do recommend the auxiliary appliance for the use of gas, and there are a number of those made that can be attached to hot air furnaces, so-called, or to a hot water or steam system. That gives two separate fires and when the gas is short they fire up the coal furnace.

Q. Your objection to the plan mentioned in my question is that you can't control the consumer?

A. Not only that, but they were not desirable for the use of gas. It is wasteful.

Q. You referred in your direct examination to the acquisition of two systems of pipe line producing gas. Were those the companies, the ones that started producing in Knox County?

A. Yes, one of those was.

Q. What company was that?

A. The Mohican.

1340 Q. How much of the line connecting that field with the transmission system at or near McKee farm, was built by the Mohican Company?

A. Not any of it.

Q. Your company built the connecting line?

A. At the time of the purchase, the connecting line had already been built. The Mohican purchase really relieved us of the demand in Akron, and it is yet producing more gas than Akron demands for domestic uses. That was really a relief from our Cleveland demand, rather than increasing it.

Q. Who built the line?

A. It was built by the Mohican Company.

Q. I refer now to the line over at or near Loudonville, and extending to the McKee farm?

A. That was the Mohican Company at Loudonville.

Q. Then your company did buy that line from the McKee farm down into the Knox field, along with the production that you got down there?

A. We extended that line afterwards.

Q. From what company did you purchase the other line?

A. Mohican gas fuel, I think was the corporate name.

Q. That was at or about what date?

A. 1908.

1341 Q. And about the same year you commenced the construction of the first line connecting from the Gross farm over to Austintown junction?

A. Yes, sir.

Q. And the 16-inch line was built later?

A. Yes, the 16-inch line was built in 1915.

Q. I assume from that that the production of the Mahoning Gas Fuel Company, at or near Youngstown, was insufficient for the supply of that place, and you built those lines to connect with your main transportation system?

A. Yes, sir.

Q. You referred just before lunch to some little production along the Ohio River. That went across into West Virginia, I believe. Was that to the town of Friendly?

A. I think that was taken over to Wheeling.

Q. That would be a portion of the supply of the Manufacturers' Light & Heat Company, doing business around in there?

A. I think not. I think it is the Gas Company of West Virginia, or the West Virginia Gas Company.

Q. You said something touching the advantage which the consumer near the source of your purchase from the Hope Natural Gas Company, or near the source of supply, had over those consumers toward the end of the line. Just why is that advantage and what is it?

1342 A. I think, as I understood the question, it was asked as to the source as being in the vicinity of the source of supply, and by that I suppose that question meant that it was nearer the high pressure mains or the regulators; not necessarily the field. Of course, if you had only gas enough to supply Canton and Akron, they would naturally get it before it got to Cleveland. They would have the first opportunity of taking it out of the main. That also applies to the disposition of gas after you get out to Cleveland, and as I tried to describe the distribution there by a cartwheel, going in from the high pressure mains, that is what I intended to convey. If we have a fair supply of gas for all our domestic consumers, we would apportion to each municipality its quota, according to the number of consumers served; that is, if we had a hundred million of gas and Cleveland domestic consumers required 63 per cent, Cleveland would get 63,000,000, and the community with 6 per cent would get 6,000,000, and that is the way we attempt to distribute it. We have measuring stations on all the larger towns.

Q. Do you in fact make the apportionment you refer to?

A. We do.

Q. Then Canton and Akron have no better supply or advantage?

A. None whatever.

1343 Q. Then what consumer did you refer to, along the transmission lines, like St. Clairsville, or something of that sort, having the advantage?

A. I either misunderstood the question or you did. My understanding of the question was that the reply as to the distribution of gas from the high pressure mains, St. Clairsville or any point near them, should be to the effect that they would not be given any more gas per consumer than Cleveland.

Q. Because you can so regulate it in the line as to apportion the supply?

A. We can rather measure it out of the line.

Q. You do adopt that practice?

A. We do.

Q. And that practice is practicable in any properly conducted pipe line system, I presume?

A. I suppose that would depend somewhat on the construction.

The conduct of the system after it is constructed is always governed by local conditions. Our system happens to be so constructed that the towns are separated,—that is, the lines running north and south, we call it. You will notice that the branch lines run east and west, so that when we come to the field limits we can place a measuring device there and measure the gas. Of course, where the community is very small, such an appliance would have to be more of an estimate or an average, as it would be quite difficult to go out
1344 over it and close the gates down, but in a large community where you keep a man constantly on the line, it is not at all difficult.

Q. But the transmission system can be regulated?

A. Yes.

Q. You referred to your industrial contracts as being so worded as to enable you to cut them off when the supply was needed for domestic purposes, and the orders of the Ohio Public Utilities Commission in that regard. Do I understand that your own practice and the orders of the Commission compel you to cut off all service of natural gas at times of shortage to domestic consumers?

A. The order of the Commission is such that it applied to all consumers, domestic and otherwise, using gas in excess of 100,000 feet in any one month. We have always prior, and now do, apply the order of the Commission to the industrials, no matter how small the amount they use. When the cold weather is approaching, we watch the weather predictions very closely, and anticipate by sending our man to the factories to see that the gates are closed.

Q. The point I want to elicit is, have you any industries that are compelled to have a small supply at all times?

A. That might occur for a day. Take a concern with a cupola, for instance, with a lot of molten metal in it, it might be nec-
1345 essary to carry a small fire to prevent that from cooling rapidly and destroying the metal. That, however, takes a very small amount of gas.

Q. That is, in the steel mills?

A. Yes. And that takes a very small amount, and we try to do that, if possible.

Q. So that your entire available supply is devoted to domestic service, and required to be at times of stress.

A. Yes, our entire sales last year for industrial uses were only three hundred twenty-three million.

Q. I understood you to give a valuation of $47,000,000, in round figures, for your company, as of December 31, 1917, and a total outstanding capital stock issue of $38,000,000?

A. Yes, sir.

Q. Has any of that stock been issued in the form of dividends?

A. Yes, sir.

Q. What percentage?

A. Stock dividends, $4,500,000.

Q. Is the forty-seven million odd dollars valuation the valuation for which you return your property for taxation purposes, or is it a mere book value?

A. That is the appraised value. Our property—the Ohio Tax Commission fixes the value of our property for taxation purposes. The tax value is approximately between thirty and thirty-
1346 nine million dollars. I think that is probably a higher percentage of taxation than should be applied to property.

Q. You do not include wells in your valuation, except in so far as concerns the material. Is that correct?

A. That is all. Neither the labor nor the leasehold are included in the valuation, except the cost of the leasehold would be included.

Q. You mean by that, the bonus paid?

A. Yes.

Q. You do not include yearly rentals or well rentals?

A. No, those are operating expenses.

Q. Mr. Daly, you spoke of your competitors, mentioning the Medina Fuel Company, the Ohio Cities Gas Company and the Ohio Fuel Supply Company and the Logan Natural Gas Company. Will you tell us in a general way, and as briefly as you can, the fields where those companies operate?

A. Where they operate?

Q. Yes.

A. They are operating in Ohio in every county where gas is being produced. That is, at least the Ohio Fuel and the Logan and the Medina Company and the Ohio Cities are also large operators. I don't know so much about the Medina Company's operations outside of Medina County, but they do transport gas to as far south
1347 as Lima, Ohio, and they produce gas in different localities tributary to that line.

Q. They operate in the counties you have mentioned as counties where the East Ohio Company is operating?

A. Yes.

Q. And have production in those counties?

A. I wouldn't say that they have production in all of them, but they have attempted to have in nearly all of them. Possibly I might omit from all of the counties—I don't know that the Medina Company has any production in the southerly tier of counties down near the Ohio River. There is only a small output there.

Q. In your essay upon the advantages of natural gas over other fuel, you were speaking generally of the service of natural gas in all the communities. In other words, those advantages are inherent in the service of natural gas, wherever it is served?

A. Yes, I think that would apply.

Q. It applies to the fuel itself and not to the particular community where served?

A. I think it applies to both in the communities that are fortunate enough to have it.

Q. And the loss of the fuel to any community would entail
1348 precisely the same losses in one place as in another?

A. Yes, in proportion to their population, of course.

Q. Relatively, I mean.

A. Yes.

Q. You had a shortage last year, and you contemplate a larger

shortage the coming winter. What have you to say about the winters thereafter, under the conditions now existing?

A. The natural inference would be that the shortage would become more pronounced as it went on, unless through unexpected development some place we might be able to get an additional supply of gas. That is always a possibility, but it is a rather remote possibility at this time, from any knowledge we have.

Q. Did I correctly understand you to say that any decrease in the amount you are personally able to obtain under your contract with the Hope Natural Gas Company will affect your company in its capacity to serve its customers?

A. Yes, sir.

Q. It is merely a matter of proportion, depending upon the amount of decrease?

A. Yes.

Q. And the consequences are twofold; wherever there is a decrease, the consequences to your consumers and the consequent de-
1349 preciation or effect upon the physical valuation of your properties?

A. Yes; unless our revenue could be increased in some other way, by charging higher rates. It might be that the physical valuation of the property would only be affected as to its transportation system, and that would naturally be lost only when the natural gas ceased to be procurable in quantities sufficient to serve and it has a merchantable article in competition with other fuels.

Q. To get at the matter definitely, Mr. Daly, how much will your company be affected in the value of its property, if the Hope Natural Gas Company should furnish fuel to all of the present consumers it has in West Virginia at all times?

A. If they are furnishing those customers fully now, and didn't increase the amount of gas any, I don't see any reason for the East Ohio to find any fault with them.

Q. Do you know whether or not the Hope Natural Gas Company is at all times now fully serving its domestic and industrial consumers in West Virginia?

A. I do not; I have no knowledge.

Q. Does not the contract that your company holds with the Hope Natural Gas Company compel the Hope Natural Gas Company to cut off industrial service in West Virginia?

1350 A. As I recall it, I think the contract refers only to domestic consumers. The only exception that is made is a provision for a supply of gas for its domestic consumers. I don't recall that there is any reference to the use of industrial gas in West Virginia.

Q. You don't know whether or not the Hope Natural Gas Company is now fully serving either its present domestic or its present industrials?

A. No, I have no means of knowing that.

Q. Do you know how much would be required to serve the domestic consumers along its lines not now being served?

A. No.

Q. Do you know how much would be required to serve industrial consumers along its lines not now being served?

A. No, I wouldn't know that. I have no knowledge of that.

Q. All you can say is, that if the amount being marketed by the Hope Natural Gas Company to your company is decreased, your company will be correspondingly affected?

A. Yes, sir.

Q. You don't know when that will be, nor to what extent?

A. No, I have no knowledge of that; but whenever it occurs it will have the same relative effect.

Q. And when you refer to the ultimate result, you meant that when the Hope Natural Gas Company was unable to furnish
1351 you any supply at the Ohio River?

A. Oh, no.

Q. At what point will your plant become junk?

A. When, in proportion to the decrease, it will pass along, and we are getting 75 per cent of the present supply. Of course, it would be so totally inadequate for our demands that our business would be practically at an end for anything except cook stoves or lighting. The user will not tolerate a service so inadequate as we would be able to give under such conditions. Our remedy would be only to reduce and to apply it to the smaller gas using appliances, and in consequence our pipe line facilities would not be useful to us.

Q. Did I understand you correctly? Is 75 per cent of your present supply the point at which you draw the line?

A. That would render such inadequate service that we would be obliged to prohibit the use of gas for other than cooking or lighting. Now, for that amount of gas we would need for this purpose one pipe line. That would be sufficient, so that three-fourths of our investment at least would be lost, and our transmission system as well. Of course, there would be a very great loss in the investment on account of having an overhead there that is entirely out of proportion to the amount of business.

1352 Q. Do you need all five of your lines to transport the present amount available from the Hope Natural Gas Company?

A. We do not.

Q. How many of those lines could you get along with?

A. Four.

Q. Next year you might be able to get along with three?

A. If this law is carried out, we can get along with none.

Q. At the present decrease in supply, how long will it be before another of your lines becomes useless?

A. I have no way of knowing that.

Q. At the present rate of decrease?

A. I don't know what that is.

Q. The same percentage of decrease that you estimated this year over last year, in your statement that a 75,000,000 feet shortage would probably occur this year. Based on that.

A. Well, that shortage is due to additional domestic consumers coming on and there is a reason for that shortage that does not apply

to West Virginia. Last year there was a large amount of gas obtained from McKeesport, and that relieved the demand in Pittsburgh, and we were fortunate enough to obtain that additional supply. We do not anticipate we are going to get that next year. What the decrease is in West Virginia we have no knowledge of. I suppose such evidence has been introduced, but I don't know what it
1353 was. I have no personal knowledge of the field.

Q. Let's get at it this way: If there was a decline of 10 per cent——

A. If there was a decline of 10 per cent, in order to answer your question, I would say that commercially natural gas in the West Virginia field would be practically at an end in eight years. I am trying to answer your previous question.

Q. I know you are. How long has it been since it was necessary for you to use this line you say you do not now need?

A. Well, we probably could have gotten along without that line during the last year, or possibly two years—not to exceed two years. We are still using it.

Q. At the present rate, you think something like eight years will see the depletion to the point of impracticable use?

A. If it declines at the rate of 10 per cent per annum, I would say when 80 per cent is gone, that it would no longer be commercially profitable to transport that quantity of gas such a distance. Smaller quantities might pay to enrich other gases and substitute for oil enrichment, although it would be quite expensive.

Q. Have you ever estimated the minimum amount you could take from the Hope Natural Gas Company at the Ohio River and profitably use?

1354 A. No, sir, I never have.

Q. Whatever that point may be, it will be reached in the course of time, as the fields decrease?

A. In my opinion, it will be reached.

Q. But there will still be some gas; the proposition is that there will not be enough to make it commercially worth while to market it such a distance and through such a system; is that correct?

A. I would say so, at the present time. We can't anticipate what improvements may be brought about that might be helpful, but that would be my opinion now.

Q. As a matter of fact, you can't receive a million feet per day at the Ohio River and market it profitably, could you?

A. No, sir.

Q. And the probabilities are that there would be considerably more than that required to make it a profitable proposition?

A. I would say so.

Q. I understand that you apportion, as between, for present purposes we will say, Canton, Akron and Cleveland. What is the result of that apportionment in cold weather?

A. We have found that in the towns where the lower prices prevail, they use their quota and go short; in the towns where the higher prices prevail, they get along very comfortably.

1355 Q. Did your company get along in Cleveland very comfortably during this period last winter that you refer to?

A. Very uncomfortably; but very low prices prevailed.

Q. Then the remedy for the situation is, to raise the prices and we will have plenty of gas?

A. I wouldn't put it just that way. I would say if you raise the prices you will have good service, because you make it worth while to the consumer. So long as you sell gas at the miserably low prices that prevail, not only in West Virginia but elsewhere, there is no incentive to save. At the present time, 35 cents per thousand is cheaper than soft coal, and so you inflict a punishment upon people who have only the small appliances. A gas company has to have revenue; it has no other means of getting money except from its consumer, and the consumer must become a part of this organization and help conserve this gas. It doesn't add one foot of gas to your output to increase the price, but you simply utilize it better.

Q. The theory you have just elaborated on is the Daly plan we have heard something about in these proceedings before, namely, that conservation lies, and only can lie, in increasing the price and making the consumer conserve?

A. I think that is the direct route. Some have suggested that they would do that by legislation. If such legislation is
1356 effected, naturally the sales of the gas company must be reduced. The gas company cannot reduce its sales 50 per cent without increasing its price. Instead of taking the circuitous route that the law will take, I would propose taking an air line and arriving at it directly. I think we are both aiming at the same object, but we are approaching it differently. Mine might be the wrong way. I think that Daly plan is a misnomer; I claim no credit for originating it, but we ought to apply it.

Q. The substance of it is to make each consumer his own policeman?

A. That is the idea.

Q. Isn't it true that the time must come when the natural gas supply is bound to get to the point where you cannot furnish all of your consumers even on the plan you suggest?

A. There isn't any doubt about that, but that time may be delayed and wonderful contribution made to the people by cutting off the industrial supply not only in West Virginia but every other state, and giving the gas entirely to the domestic user and making him pay a price for that gas that will prolong the life of it for many years, by reason of the decreased output from the fields.

Q. Let's assume that that time has come and you can't furnish your domestic consumers, even by penalizing them under the
1357 proposed plan. What suggestions have been worked out for that situation?

A. Well, that is a condition that may not occur, and it will of course be hastened, as it would with any other mineral, if there was an extravagant production and waste.

Q. I want to know what would be the proposed plan of your company at that time. Are you going to divide it up among all your consumers, giving each one his allotment or share, or are you going to restrict your territory of service?

A. Well, I would say that under present conditions, just as we would be forced to look upon it today, if we had our own way about it, we would restrict our territory.

Q. Is there any other way?

A. The law says there is. I am not inclined to dispute the law.

Q. What would be the effect of it?

A. The effect of it would be woefully unsatisfactory service to everybody.

Q. It would not be useful to anybody?

A. That is the idea.

Q. And that is the natural result of the depletion of supply and the point we must come to some time?

A. I agree with you fully, sir.

Q. The matter of conservation is simply staving off that
1358 evil day which we all fear?

A. Well, by staving it off, we can confer a great favor on humanity, both commercially and otherwise.

Q. You spoke of cutting off the industrial companies. Why do you serve industrial consumers, instead of keeping your gas for domestic uurposes?

A. We serve industrial users because we are met in the field by competition that is taking gas out—many of these competitors with no public obligation whatever; simply a 365 day a year demand for gas, for practically an equal amount each day. They have no peak load, and consequently they take the gas out of their field much more rapidly than those who have taken obligations to supply communities. They are in every field and there seems to be no control exercised over people of that calibre. We must continue to take gas out of that territory, although the domestic consumer does not want it today. He doesn't use enough to pay the overhead—to pay the clerk hire, to say nothing of the overhead.

Q. The independent producer is not controlled or controllable, and you meet him in competition?

A. Yes, in the field.

Q. I understood you to say that there is a certain field of the East Ohio Gas Company that was shut in and used only for peak load periods for domestic consumers?

1359 A. Yes.

Q. Where is that?

A. Down in Wayne County.

Q. Does that cover your Knox County production?

A. No.

Q. It is a field you have developed in Wayne yourself?

A. Yes.

Q. None of that is used for industrial purposes?

A. None whatever.

Q. In your competition that requires you to serve your gas for industrial purposes, is the other production which you have referred to in your examination?

A. Yes.

Q. You have no competition on your purchase from the Hope Natural Gas Company, have you?

A. No.

Q. Then why do you use that for industrial purposes?

A. We don't.

Q. None of it?

A. Hardly any. They have a competitive field down there, and whenever they are willing to sell us gas, which they do at a certain price, and at a very high price, we do not dispose of any gas at so-called industrial rates. The fact that we only disposed of
1360 323,000,000 last year, or about a million feet a day, indicates that we are not buying very heavily from the Hope Company for industrial purposes?

Q. But you have, since the time of your original connection with the Hope Natural Gas Company, sold a portion of your gas purchased from the Hope Company for industrial purposes?

A. Yes, that is the custom of all gas companies. It was necessary, in order to establish a low domestic rate.

Q. That is the true explanation of why all the companies do it, because they need the money?

A. Yes.

Q. The industrial service of gas is common among all of the companies?

A. Well, it has not been with us during the last few years. Of course, in the earlier years we sold all the gas we could buy, because we were buying at a low rate and were selling at a low rate, but the volume helped out.

Q. How many distributing companies does the East Ohio Gas Company sell to, and where are they located?

A. We are selling to the Alliance Gas Company, under order of court and temporary injunction, and we are selling to the St. Clairsville Company by order of the Public Utilities Commission of Ohio. Those are the only companies we are selling to, and we have
1361 been trying for over two years to get away from the alliance at the expiration of our contract, but so far we have been headed off. The Supreme Court decided we had a right to get out, but the Common Pleas Court enjoined us from getting out.

Q. Do you have a service contract with the Alliance Gas Company to supply it?

A. We had a service contract to supply it, which expired the first day of November, if I have the date correctly. It was in a month of that time,—1918, and they were given notice in June, 1916, that after the expiration of that contract we could not supply them. We notified them to get ready to make other arrangements. War conditions came on and the Federal Fuel Administrator gave orders for the continuance of that service for another year. At the end of another year, they went to court and enjoined us. And then they secured the passage of the Miller Bill, which provides that no one could discontinue service to a municipality without the permission of the Public Utilities Commission. This was simply a contract between our company and the distributing company. We went through the Supreme Court, and they decided in our favor, and the Common Pleas Court granted a temporary injunction upon which we have not been able to get a hearing so far.

Q. What is the situation touching St. Clairsville?

1362 A. St. Clairsville was notified last fall, I think it was. We had to give them six months' notice. They use a very small amount of gas and we notified them that we would discontinue their supply May 31st. The Public Utilities Commission have ordered us not to discontinue the supply.

Q. What was the occasion for your desire to discontinue this service? Was it lack of supply?

A. Lack of supply.

Redirect examination.

Mr. Eagleson:

Q. Mr. Daly, you spoke, in answer to a question on cross-examination, in substance, that the 75,000,000 feet shortage last winter was due to additional domestic consumers. I ask you whether or not the weather conditions and the low temperature of last winter did not also contribute largely to that shortage?

A. The question, Mr. Eagleson, applied to our shortage the coming winter, on account of additional consumers. We were probably not 75,000,000 feet short last winter, but about 60,000,000. The weather was unusually cold, and we had very prolonged periods of cold weather. During those periods of cold weather, when the pressure once gets down, the people use the gas just as fast as it

1363 comes through the line, and in consequence you are unable to store any over night. Where you haven't got an abundant supply to take care of it all the time, that results in very bad service. We were very short of gas last winter, and will probably suffer greater shortage next winter.

Q. Will the shortage, if such there be, in winters to come, depend to a greater or less extent upon the coldness of the weather?

A. Yes, sir; cold weather creates increased demand.

Q. From your thirty-seven years' experience in the natural gas business, what would you say as to low prices for natural gas in comparison with other fuels, contributing to excessive use or waste in all sections where it is used?

A. There can be no question about the waste of gas caused by low prices, domestic as well as industrial.

A. And from your long experience in Ohio, and with particular reference to your company and its consumers, under the sliding scale upward rate called the Daly System, is it not a fact that the low-priced gas invites the use and waste in commercial and industrial ways?

A. Yes, sir; I have no hesitancy in stating that, and it is borne out by statistics. The statistics probably would not be available, as to the use of gas applied to industrials, but they are available

1364 for the domestic use. In cities where they have a very low price, people use a very considerable quantity more per annum per capita than they do where the price is proportionately higher. There seems to be about the same amount of money spent and the same service rendered for gas, whether it is sold at 50 cents or whether it is sold at 25 cents.

Q. When the supply of gas which a company may have for distribution gets below a certain point, what is your opinion as to whether or not there is very great danger involved in its consumption?

A. There is no doubt but that the condition you describe would bring about a hazard in the use of gas, which might result in loss of life and property, by reason of explosions and asphyxiation. Fires could not be left burning over night with any degree of certainty or safety, and it would render the service not only unsatisfactory but dangerous.

Q. And would or would not that danger be greatly augmented if the source of supply was intermittent?

A. Well, that would bring about even a worse condition, unless there was provision made for advance notice of several days to consumers. One day would not be sufficient, because many homes might be vacant. People might be away from home and the gas in the furnace go out, gas escape, and somebody go in with a lighted match or a sigar or cigarette, and that would be an additional
1365 hazard for the gas company and it would require caution on the part of the user of gas, to say the least.

Q. Mr. Daly, you spoke, in answer to Mr. Steptoe's inquiry, of having declared during the life of your company some stock dividends?

A. Yes, sir.

Q. Please advise us if you have in mind the particulars with reference to the cash dividends of your company?

A. Our first cash dividend was paid in 1909, about eleven years after the company started in business.

Q. Was that the first dividend of any kind or character declared by the company in its life up to that time?

A. No; the stock dividend I think was $4,500,000. There was a dividend declared in 1909 of $300,000. The investment at that time was approximately $13,000,000, making the percentage 2.35. The next dividend was in 1910, $596,944, an average percentage on the investment of 1.67 per cent. The next dividend was in 1911, $700,000, and on the investment was 1.94 per cent. The next dividend was in 1912, $1,700,000, 4.43 per cent. The next was in 1913, the same amount of money, but an additional investment brought the percentage down to 4.23 per cent. The dividend in 1914 was $1,700,000, a percentage on the investment of 4.10 per cent; 1915, $1,700,000, brought the percentage down to 4.03 per cent; 1916, $1,700,000, investment $44,000,000 plus, brought
1366 the percentage down to 3.83 per cent; 1917, the dividend was $1,700,000, or 3.77 per cent on the investment; 1918, the dividend was $2,943,000, or 6.30 per cent. Those were the only cash dividends we have been paid.

Recross-examination.

Mr. Steptoe:

Q. Referring to the consumption, use and distribution of gas in relation to price, as a matter of fact, the whole situation of gas con-

sumed, the nature of its use, and the nature of its distribution, and where used, is very largely a matter of price, is it not?

A. No; the company that I represent is unfortunate enough to have some contracts at a low price, compared with what we are getting in other places, but that does not influence us in any way in giving those people their just proportion or quota of gas. We have not tried to. The contracts were taken in 1911 or '12 for a period of ten years, and municipalities are not as a rule inclined to change prices for public utilities, especially on an upward grade.

Q. Isn't it true that the production of the independent producer is getting to the point of the highest price?

A. That would be true to the extent that his product would
1367 be concerned; but that is usually purchased by the utility that has to distribute it in the communities that they may be under contract to serve, so while it would apply to the independent producer, it could not apply to the public utilities. They would have to serve all people alike.

Q. It would also apply to the industrial or private consumers receiving gas directly from the independent producer?

A. Yes, I think that is so.

Q. And isn't it true that a very, very large proportion of the gas produced is by independent producers in the field?

A. Well, that is true in the fields from which the East Ohio purchases gas. I think probably the independent producer is responsible for about 50 per cent of the output there.

Q. In the cross examination, Mr. Daly, you promised me certain statements, touching the domestic and industrial consumption year by year, operated and unoperated acreage, and wells year by year, as well as certain other information. Are you prepared to give that information now?

A. The information is not available to me now, but I will have it prepared upon my return to Cleveland, and send it to any point you designate.

The Commissioner: Let the information be sent to Mr.
1368 Eagleson, who will place it on the transcript as soon as he is able to have the information in hand, it being assented to by counsel on both sides that this course shall be followed.

JOHN B. TONKIN, recalled, testified as follows:

Direct examination.

Mr. Weil:

Q. Mr. Tonkin, you promised us before you left the witness stand, that you would have prepared and furnished a statement showing the acreage, gas sales and gas produced in Pennsylvania and West Virginia, the number of producing gas wells, number of wells drilled, number of consumers, domestic, industrial and other companies, and the amount — sales, domestic, industrial and other companies, fuel used in pump stations and drilling wells, for the

years 1910 to 1919, inclusive. Have you prepared such a statement?

A. I have.

Q. Will you please read that into the record?

1369 A. (Reading:)

	1910.	1911.
Operated Acreage—Acres	48,895	48,604
" " Cost	286,750.00	275,974.53
Unoperated Acreage—Acres	136,282	161,1616
" " Cost	229,544.10	164,113.74
Gas Produced—M Cu. Ft.	9,570,665	7,414,355
Gas Purchased (Penna.) M cu. ft	1,251,571	927,447
" " (W. Va.) "	20,427,446	19,885,811
No. Producing Gas Wells	539	544
No. Wells Drilled	42	36
No. Consumers—Domestic	41,673	43,115
" " Industrial	291	285
" " Other Companies	6	5
Amt. of Sales, Domestic—M cu. ft.	5,782,157	5,8383,125
" " " Industrial— "	**21,800,835	19,566,354
" " " Other Cos. "	3,666,690	2,793,134

**Includes Gas for own operations as follows:

Fuel Used at Pump Stations, etc.	1,372,777	769,372
Pumping & Drilling Wells (Est.)	200,000	200,000
Total Gas for Operations	1,572,777	969,372

1370

	1912.	1913.
Operated Acreage—Acres	53,092	56,765
" " Cost	298,177.73	297,544.22
Unoperated Acreage—Acres	217,779	197,823
" " Cost	168,436.42	164,207.24
Gas Produced—M Cu. Ft.	7,801,806	10,963,966
Gas Purchased (Penna.) M Cu. Ft.	673,311	1,139,061
" " (W. Va.) "	23,303,041	20,176,604
No. Producing Gas Wells	633	693
No. Wells Drilled	59	83
No. Consumers—Domestic	43,449	51,522
" " Industrial	251	302
" " Other Companies	6	3
Amt. of Sales, Domestic—M Cu. Ft.	6,389,219	6,223,958
" " " Industrial— "	**21,750,172	22,749,043
" " " Other Cos.— "	3,638,767	3,306,630

**Includes Gas for own Operations, as follows:

Fuel Used at Pump Stations, etc.	683,278	669,828
Pumping & Drilling Wells (Est.)	200,000	300,000
Total Gas for Operations	883,278	969,828

1371

	1914.	1915.
Operated Acreage—Acres	58,400	59,739
" " Cost	297,761.99	290,639.67
Unoperated Acreage—Acres	205,360	227,240
" " Cost	161,010.64	165,556.31
Gas Produced—M Cu. Ft.	9,382,830	10,100,508
Gas Purchased (Penna.) M Cu. Ft.	2,019,195	2,089,466
" " (W. Va.) "	17,919,695	21,597,627
No. Producing Gas Wells	721	747
No. Wells Drilled	42	50
No. Consumers—Domestic	58,583	64,958
" " Industrial	290	296
" " Other Companies	3	3
Amt. of Sales, Domestic—M Cu. Ft.	6,945,094	7,353,320
" " " Industrial— "	**18,921,819	22,205,260
" " " Other Cos.— "	3,454,807	4,229,021

**Includes Gas for own operations, as follows:

Fuel Used at Pump Stations, etc.	835,377	1,117,196
Pumping & Drilling Wells (Est.)	200,000	200,000
Total Gas for Operations	1,035,377	1,317,196

1372

	1916.	1917.
Operated Acreage—Acres	66,439	74,768
" " Cost	288,932.17	287,399.91
Unoperated Acreage—Acres	310,850	318,621
" " Cost	187,056.87	190,783.11
Gas Produced—M Cu. Ft.	13,152,893	14,041,262
Gas Purchased (Penna.) M Cu. Ft.	1,448,496	1,453,773
" " (W. Va.) "	26,251,185	23,276,116
No. Producing Gas Wells	846	945
No. Wells Drilled	120	174
No. Consumers—Domestic	70,131	74,021
" " Industrial	276	236
" " Other Companies	4	4
Amt. of Sales, Domestic—M Cu. Ft.	8,222,760	10,069,736
" " " Industrial— "	**28,303,675	25,031,622
" " " Other Cos.— "	4,326,139	3,659,793

**Includes Gas for own Operations as follows:

Fuel Used at Pump Stations, etc.	1,723,272	1,922,760
Pumping & Drilling Wells (Est.)	450,000	550,000
Total Gas for Operations	2,173,272	2,472,760

1373

	1918.	1919.
Operated Acreage—Acres	82,277	85,819
" " Cost	283,773.58	374,382.22
Unoperated Acreage—Acres	310,461	302,559
" " Cost	179,304.29	167,966.53
Gas Produced—M Cu. Ft.	13,850,362	12,223,833
Gas Purchased (Penna.) M Cu. Ft.	1,269,314	6,948,119
" " (W. Va.) "	18,209,928	6,496,994
No. Producing Gas Wells	1,042	1,108
No. Wells Drilled	146	130
No. Consumers—Domestic	75,697	79,112
" " Industrial	206	227
" " Other Companies	5	5
Amt. of Sales, Domestic—M Cu. Ft.	9,715,074	9,654,042
" " " Industrial— "	**18,377,988	12,264,921
" " " Other Cos.— "	5,236,542	3,749,983

**Includes Gas for Own Operations, as follows:

Fuel Used at Pump Stations, etc.	1,283,737	574,062
Pumping & Drilling Wells (Est.)	550,000	250,000
Total Gas for Operations	1,833,737	824,062

Q. You also promised to prepare a statement showing the net income and surplus of the Peoples Natural Gas Company from
1374 the year 1910 to 1919, inclusive. Have you prepared such a statement?

A. I have prepared such a statement.

Q. Will you please read that into the record?

A. (Reading:)

The Peoples Natural Gas Company.

Statement Showing Net Income and Surplus Years 1910 *to* 1919, *Inclusive.*

	Net Income.	Surplus.
1910	1,316,913.93	667,886.75
1911	1,344,888.97	652,775.72
1912	793,451.51	39,127.27
1913	1,452,727.22	354,354.45
1914	1,131,658.32	823,012.77
1915	1,253,322.05	1,056,334.82
1916	2,001,653.45	930,488.27
1917	1,992,326.00	1,822,814.27
1918	1,975,300.34	2,918.114.61
1919	2,383,178.21	3,651,292.82

Q. You also promised to have prepared a statement of your company, showing the amount of investment on January 31,
1375 1903, when the company was acquired by your people, up to December 31, 1919, inclusive. Have you prepared such a statement?

A. I have.

Q. Will you please read that into the record?

A. (Reading:)

The Peoples Natural Gas Company.

Statement Showing Amount of Investment Jan. 31st, 1903, to Dec. 31st, 1919.

January 31, 1903, ...	2,866,168.37
December 31, 1903, ...	3,356,291.66
" " 1904, ...	5,542,687.20
" " 1905, ...	5,720,388.09
" " 1906, ...	5,840,844.73
" " 1907, ...	6,166,291.77
" " 1908, ...	6,926,445.78
" " 1909, ...	7,711,793.13
" " 1910, ...	8,895,543.06
" " 1911, ...	9,055,152.74
" " 1912, ...	9,713,904.90
" " 1913, ...	10,736,887.28
" " 1914, ...	11,855,830.50
" " 1915, ...	12,324,018.03
" " 1916, ...	13,409,435.93
" " 1917, ...	14,207,497.76
" " 1918, ...	14,955,003.89
" " 1919, ...	16,442,234.71

Q. At my request, you also agreed to make a computation on the subject of dividends of your company. Have you made those computations?

A. I have.

Q. What was the percentage of dividends declared by the Peoples Natural Gas Company, from the time it was acquired up to
1376 the present time, on the amount of its investment? What percentage would it be, per annum?

A. On the amount of its investment, it would be 7.45 per cent minus.

Q. How many years was it in which you declared no dividends at all from 1903 to 1909?

A. I think it was five.

Q. Taking all the dividends declared, it would amount to 7.45 per cent minus on the investment of the company?

A. Yes, sir.

Cross-Examination.

Mr. Steptoe:

Q. How much was your investment upon which those dividends were paid here built up of earnings?
A. About $9,000,000.

Mr. Weil: It appears that a copy of the contract — the Pittsburgh and West Virginia Gas Company and the United Fuel Gas Company was referred to on cross examination of Judge Reed, and was to be produced later. It is agreed by counsel for the respective parties that a copy of this agreement is to be furnished to the stenog-
1377 rapher, identified as an exhibit, and attached to the testimony of Judge Reed as one of the exhibits of the defendant.

The Commissioner: The adjournment will be to Columbus, Ohio, where at 10 o'clock in the morning of July 20, 1920, the hearing will be resumed in the Hearing Room of the Supreme Court of the State of Ohio, in the State Capitol, by consent of counsel.

By consent of counsel, all notice of this resumption of the taking of testimony is waived.

Mr. Steptoe: I think we desire to say that the date is acceptable, and we will be present; but in so far as agreeing to the date is concerned, counsel for the State of West Virginia desire to direct attention to a statement by counsel for complainants, shown on pages 916 and 917 of the transcript, indicating an intent to apply to the Court for extension of time. In view of that statement, we desire now to say that the State of West Virginia is ready and willing at all times to meet and take this evidence; but believe it advisable, in view of that statement, to protest against the short hours
1378 and the numerous adjournments that have taken place in the past, and we will, of course, oppose any such application as suggested. We recognize the rights of counsel to conduct their case in their own way, and regulate the hours, times and places of taking of their testimony, but we do not desire to be put in the position of assenting to hearings protracted as these have been, and the shortened hours which may hereafter be the basis of the proposed application for an extension of time. The date mentioned as the time to meet at Columbus is acceptable, and we will be present, but we do not care to be in the position of agreeing, for the reasons stated.

The Commissioner: Let the record show the statement of counsel.

ORIGINAL, #20 & #21.

October Term, 1920.

1379 THE COMMONWEALTH OF PENNSYLVANIA

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO

vs.

THE STATE OF WEST VIRGINIA.

Proceedings of Tuesday, July 20, 1920.

And now Tuesday, July 20th, the hour of 10:00 o'clock A. M. having arrived, parties met pursuant to adjournment.

Present: The Commissioner, Levi Cooke, Esq.; for the State of Ohio, Attorney General John G. Price, Freeman T. Eagleson and E. E. Corn of counsel; for the Commonwealth of Pennsylvania, A. Leo Weil, Esq.; for the State of West Virginia, Attorney General Edward T. England, Philip P. Steptoe, Esq., Fred O. Blue, Esq., and W. S. John, Esq.

1380 The Commissioner: Have any of counsel a recollection as to the Exhibits or extracts from contracts which Mr. Eagleson's last witness was to produce?

Mr. Eagleson: They will be here in a minute.

The Commissioner: What is your recollection as to what they were to be?

Mr. Weil: The record will show. I was to file a couple of contracts that were to be supplied in connection with Judge Reed's testimony I think; either Judge Reed or the other witnesses' testimony.

The Commissioner: Mr. Eagleson, at page 613 of the printed record there appears the following question:

"Q. In the Cross-examination, Mr. Daly, you promised me certain statements touching the domestic and industrial consumption year by year, operated and unoperated acreage, and wells year by year, as well as certain other information. Are you prepared to give that information now?

"A. The information is not available to me now, but I will have it prepared upon my return to Cleveland, and send it to any point you designate.

"The Commissioner: Let the information be sent to Mr. Eagleson, who will place it on the transcript as soon as he is able to have the information in hand, it being assented to by counsel on both sides that this course shall be followed."

Is that the matter to which you referred?

1381 Mr. Eagleson: Yes, your Honor; I have just got it this minute. You may want to glance at this for a minute before I place it on the record (handing same to Mr. Blue).

The Commissioner: Are you ready?

Mr. Eagleson: I was waiting until these gentlemen examined these statements.

The Commissioner: If you will, just make a statement, Mr. Eagleson, in response to that.

Mr. Eagleson: If the Commissioner please, in the cross-examination of Mr. Daly he was asked for certain statements touching the domestic and industrial consumption year by year, operated and unoperated acreage, and wells year by year, of his company, the East Ohio Gas Company, to which he answered; "The information is not available to me now, but I will have it prepared upon my return to Cleveland, and send it to any point you designate"; whereupon the Commissioner suggested that the information so requested might be sent to me, Mr. Eagleson, at Columbus, and upon reconvening for further testimony at Columbus I would spread that information upon the record; all of which being acceptable to counsel in the case, I now have that information so furnished by Mr. Daly and present the same, upon inspection of counsel for the Commonwealth of West Virginia, to the stenographer.

The Commissioner: Now, without objection of counsel for West Virginia it will be placed upon the record as if it was entered by Mr. Daly in person. Is that satisfactory?

1382 Mr. Blue: The State of West Virginia reserves the right, however, to further examine the statements offered, although they may go in at this time, and to call for any amplification thereof if counsel for West Virginia believes there should be amplification thereof and reserves the right to make any further examination respecting the Exhibits offered.

Mr. Price: That is further cross-examination?

Mr. John: No; just to see that these comply with the request and if they have all the data desired.

Mr. Eagleson: That is agreeable, and the information is on three separate sheets. The first is headed "The East Ohio Gas Company, Gas Consumption Years 1910 to 1919, inclusive." The second is headed "The East Ohio Gas Company, Summary of Gas Produced and Purchased, together with a list of the number of consumers of that company, 1910 to 1919, inclusive." The third is headed "The East Ohio Gas Company, Gas Consumption January 1 to May 31, 1920," by the various classes of consumers of that company.

And thereupon the statements last above referred to are herewith copied into the record, in the order of their introduction, and are in the words and figures following, to wit:

Gas Consumption Years 1910 *to* 1919, *Inclusive.*

	1910.		1911.	
	No. accts.	M cu. ft	No. accts.	M cu. ft.
Domestic	161,054	16,482,413	174,197	17,481,084
Gas Engines	342	382,907	365	391,219
Street Lights	6	20,292	7	24,425
Other Gas Co's	3	343,395	2	435,473
Industrial—				
Steel Plants	65	4,567,882	57	4,946,121
Brick Plants	13	1,236,980	14	1,499,907
Potteries	1	271,857	1	161,822
Laundries	18	207,582	23	199,596
Green Houses	2	1,025	2	801
Well Drillers	.....	.....	.....	.....
Auto & Tire Plants	6	488,995	5	222,384
Carbon Works	1	44,521	2	271,353
Ice Plants	3	295,773	3	272,923
Chemical Co's	2	5,411	2	30,593
Ship Bldg. Co's	1	163,614	1	162,561
Breweries	6	479,852	7	465,433
Other Industrial Companies	57	1,453,013	74	1,319,504
Total Industrial	175	9,216,505	191	9,552,998
Grand Total	*161,580	26,445,512	*174,762	27,885,199

	1912.		1913.	
	No. accts.	M cu. ft	No. accts.	M cu. ft.
Domestic	200,167	20,118,835	223,247	22,012,221
Gas Engines	365	421,844	491	502,073
Street Lights	11	27,984	15	58,392
Other Gas Co's	3	399,575	3	515,139
Industrial—				
Steel Plants	93	6,215,963	73	7,078,178
Brick Plants	16	980,542	14	1,076,525
Potteries	4	566,631	3	439,296
Laundries	26	213,720	27	250,441
Green Houses	1	878	1	848
Well Drillers	2	6,458	9	25,024
Auto & Tire Plants	4	98,329	2	130,300
Carbon Works	7	184,539	2	16,197
Ice Plants	3	282,044	4	363,566
Chemical Co's	3	60,565	3	1,046,408
Ship Bldg. Co's	1	112,913	1	148,200
Breweries	7	438,446	8	617,065
Other Industrial Companies	117	1,336,970	95	1,743,977
Total Industrial	284	10,497,998	242	12,936,025
Grand Total	*200,830	31,466,236	*223,998	36,023,850

	1914.		1915.	
	No. accts.	M cu. ft.	No. accts.	M cu. ft.
Domestic	244,917	24,885,872	263,688	27,228,000
Gas Engines	507	519,894	506	567,176
Street Lights	15	109,639	15	145,453
Other Gas Co's.	5	527,905	5	858,615
Industrial—				
Steel Plants	196	9,689,724	223	14,708,857
Brick Plants	10	655,331	12	1,238,340
Potteries	12	1,174,931	16	1,214,906
Laundries	39	515,332	37	494,453
Green Houses	1	1,027	1	1,051
Well Drillers	5	11,478	93	440,609
Auto & Tire Plants	5	227,440	15	506,776
Carbon Works	1	89,103	3	209,881
Ice Plants	1	349,251	3	428,402
Chemical Co's.	3	1,255,663	3	1,416,099
Ship Bldg. Co's.	1	152,674	1	115,188
Breweries	7	637,211	9	799,341
Other Industrial Companies	174	2,882,981	102	2,074,945
Total Industrial	455	17,642,146	518	23,648,848
Grand Total	*245,899	43,685,456	*264,732	52,448,092

1386

	1916.		1917.	
	No. accts.	M cu. ft.	No. accts.	M cu. ft.
Domestic	288,955	31,898,650	308,690	38,331,044
Gas Engines	471	2,070,096	413	416,033
Street Lights	12	182,393	12	160,008
Other Gas Co's.	2	83,781	4	2,220,475
Industrial—				
Steel Plants	232	22,913,522	113	9,541,774
Brick Plants	12	1,102,339	13	532,309
Potteries	15	608,574	1	87,479
Laundries	47	406,554	18	118,399
Green Houses	1	1,176	.....	.....
Well Drillers	41	202,827	23	153,508
Auto & Tire Plants	19	427,450	8	157,331
Carbon Works	3	268,906	2	247,347
Ice Plants	2	447,795	17	503,286
Chemical Co's.	3	1,453,058	3	460,498
Ship Bldg. Co's.	1	109,542	4	87,215
Breweries	10	719,766	11	356,773
Other Industrial Companies	115	1,186,540	821	2,887,808
Total Industrial	501	29,848,049	1,034	15,133,727
Grand Total	*289,941	64,082,969	*310,153	56,261,287

	1918.		1919.	
	No. accts.	M cu. ft.	No. accts.	M cu. ft.
Domestic	308,350	36,969,772	328,153	35,705,038
Gas Engines	386	396,036	384	343,832
Street Lights	16	159,539	15	157,578
Other Gas Co's.	4	735,613	6	632,458
Industrial—				
Steel Plants	71	7,013,712	62	3,398,637
Brick Plants	6	354,680	5	461,487
Potteries	1	77,926	4	119,324
Laundries	8	53,279	5	58,671
Green Houses	.....	.....	.....	.....
Well Drillers	23	242,936	24	154,693
Auto & Tire Plants	6	84,353	7	58,300
Carbon Works	1	257,131	2	104,794
Ice Plants	3	403,107	3	272,186
Chemical Co's.	2	203,528	1	691
Ship Bldg. Co's.	1	39,311	.....	.....
Breweries	3	65,055	1	54,284
Other Industrial Companies	219	1,621,371	333	1,947,920
Total Industrial	344	10,416,389	447	6,630,987
Grand Total	*309,100	48,677,349	*329,005	43,469,893

1388

	Totals.	
	No. accts.	M cu. ft.
Domestic	2,501,418	271,112,929
Gas Engines	4,230	6,011,110
Street Lights	124	1,045,703
Other Gas Co's.	37	6,752,429
Industrial—		
Steel Plants	1,185	90,074,370
Brick Plants	115	9,138,440
Potteries	58	4,722,746
Laundries	248	2,518,027
Green Houses	9	6,806
Well Drillers	220	1,237,533
Auto & Tire Plants	77	2,401,658
Carbon Works	24	1,693,772
Ice Plants	42	3,618,333
Chemical Co's.	25	5,932,514
Ship Bldg. Co's.	12	1,091,218
Breweries	69	4,633,226
Other Industrial Companies	2,107	18,455,029
Total Industrial	4,191	145,523,672
Grand Total	*2,510,000	430,445,843

1389 The East Ohio Gas Company.

Summary of Gas Produced and Purchased.

Year.	Gas produced and purchased. M cu. ft.	Increase over previous year. M cu. ft.	Increase over previous year. Per cent.	Decrease over previous year. M cu. ft.	Decrease over previous year. Per cent.
1910...	26,445,512	.....	.....	.....	....
1911...	27,885,199	1,439,687	5.44	.....	....
1912...	31,446,311	3,561,112	12.77	.....	....
1913...	37,049,257	5,602,946	17.82	.....	....
1914...	46,195,129	9,145,872	24.69	.....	....
1915...	54,770,929	8,575,800	18.56	.....	....
1916...	64,662,960	9,892,031	18.06	.....	...
1917...	55,429,756	.....	.....	9,233,204	14.28
1918...	49,096,107	.....	.....	6,333,649	11.43
1919...	43,968,911	.....	.....	5,127,196	10.44

* Actual number of accounts for Domestic Consumers. For Industrials, the actual number of establishments.

Consumers.

1910	161,635
1911	174,709
1912	200,776
1913	224,207
1914	245,978
1915	264,773
1916	289,944
1917	309,761
1918	309,028
1919	328,955

1390 The East Ohio Gas Company.

Gas Produced and Purchased 1910-1919, *Inclusive.*

1910.

Hope Natural Gas Company	26,381,236	M Cu. Ft.
Other Wells	64,276	" " "
Total	26,445,512	M Cu. Ft

1911.

Hope Natural Gas Company	27,784,565	M Cu. Ft.
—— ——	100,634	" " "
Total	27,885,199	M Cu. Ft.

1912.

Hope Natural Gas Company	31,242,971	M Cu. Ft.
Cuyahoga County Field	117,471	" " "
Other Wells	85,869	" " "
Total	31,446,311	M Cu. Ft.

1391 1913.

Hope Natural Gas Company	34,170,148	M Cu. Ft.
Cuyahoga County Field	577,036	" " "
Wooster Field	1,694,464	" " "
Mohican	552,288	" " "
Other Wells	55,321	" " "
Total	37,049,257	M Cu. Ft.

1914.

Hope Natural Gas Company	27,832,757	M Cu. Ft.
Cuyahoga County Field	14,641,927	" " "
Wooster Field	2,975,402	" " "
Mohican	745,043	" " "
Total	46,195,129	M Cu. Ft.

1915.

Hope Natural Gas Company	21,725,967	M Cu. Ft.
Cuyahoga	29,163,827	" " "
Wooster Field	3,753,485	" " "
Mohican	127,650	" " "
Total	54,770,929	M Cu. Ft.

1916.

Hope Natural Gas Company	45,788,609	M Cu. Ft.
Cuyahoga County Field	16,197,571	" " "
Wooster Field	2,508,263	" " "
Other Wells	168,517	" " "
Total	64,662,960	M Cu. Ft.

1917.

Hope Natural Gas Company	43,290,476	M Cu. Ft.
Cuyahoga County Field	8,467,073	" " "
Wooster Field	3,359,928	" " "
Other Wells	312,279	" " "
Total	55,429,756	M Cu. Ft.

1918.

Hope Natural Gas Company	36,620,243	M Cu. Ft.
Cuyahoga County Field	7,749,942	" " "
Wooster Field	4,433,504	" " "
Uhrichsville District	102,260	" " "
Mohican	27,705	" " "
Cadiz Field	26,284	" " "
Dover Field	4,980	" " "
Other Wells	131,189	" " "
Total	49,096,107	M Cu. Ft.

1919.

Hope Natural Gas Company	32,841,102	M Cu. Ft.
Cuyahoga County Field	7,087,420	" " "
Wooster Field	3,184,989	" " "
Uhrichsville District	31,508	" " "
Mohican	457,595	" " "
Cadiz Field	250,288	" " "
Other Wells	116,009	" " "
Total	43,968,911	M Cu. Ft.

1394 The East Ohio Gas Company.

Gas Consumption January 1 to May 31, 1920.

	No. accounts.	M Cu. Ft.
Domestic	335,329	22,077,029
Gas Engines	374	141,143
Street Lights	12	63,191
Other Gas Companies	3	293,431
Industrial:		
Steel Plants	60	1,406,938
Brick Plants	5	251,453
Potteries	1	9,571
Laundries	2	5,883
Well Drillers	24	42,030
Automobile & Tire Plants	7	30,367
Carbon Works	1	50,307
Ice Plants	2	6,388
Chemical Companies	1	106
Breweries	1	19,605
Other Industrial Companies	439	464,572
Total Industrial	543	2,287,220
Grand Total	336,261	24,862,014

Actual number of Accounts for Domestic Consumers.
For Industrials, the actual number of establishments.

1395 T. J. JONES, a witness produced on behalf of complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Price:

Q. You may state your full name, Mr. Jones.
A. T. J. Jones.

Q. Where do you reside?

A. Columbus.

Q. And what is your business, generally?

A. I am manager of the Natural Gas Properties of The Pure Oil Company, which includes Columbus, Dayton, and Springfield, Ohio.

Q. Now, Mr. Jones, in a general way I wish you would state the time, positions and nature of service that you have had in the natural gas industry.

A. I came to Columbus in October, 1913. I, at that time, became connected with The Columbus Gas and Fuel Company, after which time what was The Ohio Cities Gas Company procured the properties of The Federal Gas and Fuel Company, The Springfield Gas Company, and The Dayton Gas Company. Prior to 1913 I had been engaged mostly in the manufactured or artificial gas business, the manufacturing and distributing end. That dated back to 1898, part of which time I spent in Lansing, Michigan. Thereafter I was in Noblesville, Indiana, distributing natural gas for a couple of years; I then went to Chicago Heights, Il-
1396 linois, where we started a new artificial plant, and operated that for about a year, when I went to El Paso, Texas, as manager of a gas property there, and stayed there until I came to Columbus, a period of about nine years. Since 1913 I have been engaged here in Columbus.

Q. Now, with what company are you engaged at this time?

A. I am manager of the distributing properties of the Pure Oil Company, which was formerly the Ohio Cities Gas Company.

Q. How many companies, if more than one, are associated in that industry?

A. There is The Columbus Gas and Fuel Company, of Columbus; The Federal Gas and Fuel Company, of Columbus; The Dayton Gas Company, of Dayton; and The Springfield Gas Company, of Springfield.

Q. Can you give a brief history of those various companies?

A. Not very clearly, because as I say I have only been connected with them for a short period. What I have learned of the Columbus Gas and Fuel Company, they were one of the first to distribute natural gas from The Clinton Field in Ohio, and produced and distributed gas up until March 31, 1914, at which time they began to purchase all gas distributed in the City of Columbus from The Ohio Fuel Supply Company, beginning April 1, 1914. About that time, and I think it was that date, The Columbus Oil
1397 and Fuel Company purchased the stock or the property of The Federal Gas and Fuel Company from The Ohio Fuel Supply Company, and they also, at that time, entered into a contract to purchase all gas distributed in the City of Columbus by them from The Ohio Fuel Supply Company. Early in the year 1915—or rather early in the year 1914, the Columbus Oil and Fuel Company purchased The Springfield Gas Company, and in November of that year they entered into a contract with The Ohio Fuel Supply Company for all gas to be distributed in the City of

Springfield, Ohio. Early in 1916, The Ohio Cities Gas Company purchased the property of The Dayton Gas Company and entered into a contract with The Logan Natural Gas and Fuel Company for the supply of gas for Dayton. It may be well for me to state that The Ohio Cities Gas Company was organized in 1914, and which, through an exchange of stock, secured The Columbus Gas and Fuel Company, and through a purchase from The Columbus Oil and Fuel Company, secured the Federal Gas and Fuel Company and The Springfield Gas Company.

Q. Your company is purely a distributing company?

A. Yes, sir.

Q. Now, Mr. Jones, I wish you would state, as far as you know, the advantages and the convenience and the cost of natural
1398 gas for domestic and other purposes, as compared with other fuels.

A. Well, natural gas is, first, much more economical than any other fuel and is, of course, a much more desirable fuel than any other class of fuel. It relieves considerable work and considerable dirt in the home and makes it a much more desirable fuel in that respect.

Q. Can you state the total number of consumers served by your company?

A. In the three cities it has 112,000—a little over 112,000.

Q. What three cities do you refer to?

A. That is Columbus, Dayton and Springfield.

Q. And you operate exclusively in those cities?

A. Yes, sir, and the outlying districts, the suburbs of the three cities.

Q. What are some of the results of a shortage of gas, Mr. Jones?

A. In the first place it is very unsatisfactory both to the public and to the company, and next it increases the hazard of supplying gas, a hazard that may result in loss of property as well as injury and loss of life.

Q. That comes from the danger of explosion?

A. Yes; it would be more likely with a sudden change in
1399 volume or pressure that fires may possibly go out; some may remain lighted and the gas escaping into the home would likely explode. Otherwise all fires may go out when parties are away and they come home and not realizing the condition they might strike a light and thereby cause an explosion.

Q. Now, Mr. Jones, you stated the number of consumers that you had, and you also stated that you served three cities. Can you separate those consumers and give the number in the various cities?

A. I have a list here, yes, sir, that I prepared showing that. I have it for a period of years beginning March the 31st, 1915. The reason I fix that date is it is the fiscal year of the company, and I placed it on March 31st.

Q. That is as far back as you can go, or as far back as your statement is prepared?

A. Yes, sir; The Columbus Gas and Fuel Company, March 31st,

1915, had 41,270 consumers; The Federal Gas and Fuel Company, 12,644, and The Springfield Gas Company, 10,950. I have not the Dayton Gas Company for that year because we did not have the property.

Q. Will you give me those figures again?

A. Do you wish me to read them all?

Q. Just the totals.

A. Columbus, 41,270; that is, The Columbus Gas and Fuel Company; The Federal Gas and Fuel Company, 12,644, and
1400 The Springfield Gas Company, 10,950.

Q. Now, you say that you have not the data as to the Dayton Company?

A. Not for that year; I have for the next year and the following years.

Q. Now will you proceed with the statement showing the following years from 1915 up to the present time?

A. Columbus Gas and Fuel Company 42,718.

Q. What year is that?

A. 1916—Federal Gas and Fuel Company, 13,660, and The Dayton Gas Company, 28,427, and The Springfield Gas Company 11,755. 1917—The Columbus Gas and Fuel Company 44,472; The Federal Gas and Fuel Company, 14,722; The Dayton Gas Company, 32,398, and The Springfield Gas Company, 12,752. 1918—The Columbus Gas and Fuel Company, 45,522; The Federal Gas and Fuel Company, 15,348; The Dayton Gas Company, 33,825, and The Springfield Gas Company, 13,371. 1919—The Columbus Gas and Fuel Company, 46,117; The Federal Gas and Fuel Company, 15,567; The Dayton Gas Company, 34,837, and The Springfield Gas Company, 13,730. 1920—The Columbus Gas and Fuel Company, 46,737; The Federal Gas and Fuel Company, 15,915; The Dayton Gas Company, 35,820, and The Springfield Gas Company, 14,161.

Q. Now, Mr. Jones, for what purpose was the gas furnished to these consumers that you have referred to?

1401 A. Why for cooking, lighting, heating, heating hot water, and some industrial or commercial gas.

Q. Of the amount that you have stated was any of that of your own production?

A. No, sir.

Q. It was all purchased?

A. Yes, sir.

Q. And distributed by your company?

A. Yes, sir.

Q. Now, Mr. Jones, you may state what if any amount of your Gas is distributed to public buildings and for public purposes.

A. Yes, sir; there is.

Q. And where?

A. In the three cities we supply gas to the United States Government, to State buildings, County buildings, City buildings, Schools and Hospitals.

Q. What is any other public purpose?

A. Well, we supply gas to churches.

Q. What proportion of the amount of gas distributed by you would you say was distributed to this particular class of consumers designated here as "Public"?

A. Why that would be impossible for me to answer. I have not segregated the amount that they have consumed.

Q. What, if any, contracts have you with the state for State buildings here in Columbus; to what extent have you contracts with them?

1402 A. We have no special contracts. We supply them under the same contract as we do any other consumer, which is our ordinary contract.

Q. You are familiar with the State buildings generally here,—the City and State institutions?

A. Yes, sir, generally so.

Q. Such as the State Hospital and the different institutions of the State separate and apart from the State House proper; what is the situation with reference to supplying gas to those outlying institutions?

A. Well, we supply gas to the Hospital for Feeble Minded, the Hospital for the Insane, the School for the Blind, the School for the Deaf and Dumb; we supply gas for The Ohio State University, and all of the State institutions that there are in the City.

Q. What, if any, especial provision has been made to your knowledge in the State institutions for the use of gas to the exclusion of other fuel?

A. I think at the present time most of the buildings belonging to the State use gas for cooking and perhaps heating hot water; I think very few of them use gas for general heating purposes.

Q. To what extent, Mr. Jones, have your consumers in residential parts of the City constructed their houses for the purpose of using gas exclusively, if you know?

A. That would be difficult to say without making a complete survey. We have had a survey of the residential districts,
1403 or the homes equipped for heating with furnaces, and of those I think there is about thirty per cent of our consumers who are equipped for heating with furnaces. Of that thirty per cent there is maybe twenty-five or thirty per cent that are using entirely or exclusively gas furnaces. The balance of them heat with coal, and a small proportion of which are equipped with gas burners. The balance of them heat with coal—that is on the furnace end. The balance of our consumers, which are about seventy per cent, so far as we can tell, heat chiefly with grates and stoves, gas stoves.

Q. What would be the result, according to your best judgment, if these houses, that have been constructed for the use of gas exclusively were deprived of the gas?

A. Well, that would be an estimate, without going into the matter more carefully. There are a large number of houses that are equipped—or rather I may state the flues are so equipped that it would be impossible to use coal in them without changing their flues. Undoubtedly there are a great many flues in which gas has

been used for a long period of time which would not be suitable for using other fuel, but to what extent that is true I cannot state.

Q. Well, does it exist to any considerable degree?

A. Quite a considerable extent.

Q. Now, Mr. Jones, are you able to classify your list of
1404 consumers in Ohio in the three cities referred to?

A. In what way?

Q. Well, as to the general classification, whether they are domestic consumers, industrial or otherwise.

A. About 90 per cent of the consumers are purely domestic consumers. The other ten per cent are made up of all classes of consumers, not household consumers, which would be the small consumer in the office, stores, manufacturing of all classes in which gas is used.

Q. And in that list that you have just enumerated you include the churches, school buildings, hospitals and so forth?

A. Every consumer, yes, sir.

Q. And public buildings?

A. Yes, sir.

Q. Now, Mr. Jones, what is the duration of the term of service; that is do they extend from one end of the year to the other during the winter and summer seasons?

A. Just what is your question?

Q. Do they continue to secure gas from you during the winter and summer seasons, these consumers you have referred to, from one end of the year to the other?

A. Do you mean all consumers?

Q. Yes, as a general rule.

A. In the winter time, when the occasion arises, we discontinue the service to the larger consumers.

1405 Q. I was just about to inquire about that, what method you followed when it becomes necessary to curtail the supply of gas; what method do you follow in shutting off gas?

A. We notify them to discontinue and then inspect them to see that they do discontinue.

Q. Well, in what order do you send those notices?

A. We follow, as nearly as we can, the order issued by the Utilities Commission, taking the larger industrial and the larger commercial first and cutting them on down.

Q. Mr. Jones, can you give the capital stock,—the original capital investment together with the additions made for the purpose of conducting your business up to the present time?

A. Of the different companies?

Q. Yes.

A. I could not.

Q. Well, can you of any of the other companies?

A. I haven't it now, no, sir.

Q. In round numbers, what is your company valued at?

A. The Ohio Cities Gas Company—or rather The Pure Oil Company, and I beg your pardon for getting them mixed because the names were changed lately,—The Pure Oil Company paid some-

where between $12,000,000.00 and $13,000,000.00 for the four gas companies.

Q. You have given the value of The Pure Oil Company; what is the value of the other plants?

1406 A. No, sir; that is the value that The Pure Oil Company carries the four distributing gas companies on their books at.

Q. Oh, yes. Now, Mr. Jones, in the conduct of your business you have relationship with the companies in the State of West Virginia, have you?

A. Our relationship is with The Ohio Fuel Supply Company and The Logan Natural Gas and Fuel Company. Whether they operate in the State of West Virginia I am unable to say.

Q. What do you know concerning the dependency of your company upon the West Virginia Gas supply?

Mr. Blue: Wait a minute. The State of West Virginia objects to this question; for the reason, among others, that the witness has just stated that he does not know the relationship and, therefore, is not competent to testify.

The Commissioner: Note the objection and let the witness answer.

A. Our company operating in Dayton, that is, The Dayton Gas Company, purchases or secures its entire supply from The Logan Natural Gas and Fuel Company, which, as stated in the contract between the two companies, depends entirely upon the amount of gas that they secure from West Virginia, with purchase contracts that they have in West Virginia. In that respect The Dayton Gas Company depends entirely for its supply of gas upon what gas can be secured from West Virginia.

1407. Mr. Blue: The State of West Virginia moves to strike out the answer of the witness for the reasons, among others, first, that it is incompetent, and second, that the contract referred to by the witness is the best evidence of its contents and of the information that might be had therefrom, and the statement of the witness as given is merely hearsay and is improper.

The Commissioner: Let the transcript show the motion.

Q. Had you finished with your answer?

A. As to our supply in the cities of Springfield and Columbus I am unable to state what proportion of that gas comes from West Virginia.

Q. Now, Mr. Jones, with reference to the supply at Dayton, has that supply been adequate?

A. It has not.

Q. To what extent has it been short, would you say?

A. In the winter time I should judge that we get about 50 per cent supply there; not more than that.

Q. What would be the result if the supply of West Virginia was cut off further by reason of the enforcement of the Act in question?

Mr. Blue: Wait a minute; the State of West Virginia objects to the foregoing question, as incompetent, improper, irrelevant and immaterial and for the further reason that the witness is not competent to testify upon that question or give his opinion in re-
1408 spect thereto, and for the further reason that that question assumes a construction of the Act which is not proper at this time.

The Commissioner. Note the objection on the record.

A. The Dayton Gas Company, depending entirely upon its supply from The Logan Natural Gas and Fuel Company, which Company secures the gas from West Virginia, and having no other source of supply, if the gas was cut off entirely, would immediately have to turn to other fuel. If the gas was only partially curtailed the consumers would have to be limited undoubtedly to cooking, heating water, some lighting and perhaps a little auxiliary heating.

Q. Well, what would be the effect upon your company in a business way, Mr. Jones?

Mr. Blue: Wait a minute. The State of West Virginia objects to the question for the reasons above stated.

The Commissioner: Note the objection and let the witness answer.

A. The earnings of The Natural Gas Company depend upon the volume of gas which it can sell at the present prices. Either The Dayton Gas Company would have to receive a much larger price for its gas or they would go into the hands of a receiver.

Q. What are the possibilities of storing natural gas?

A. It is impracticable.

Q. And how can the consumers best be supplied with gas, direct or through storage facilities?

1409 A. Direct.

Q. Can you explain why, Mr. Jones?

A. Well, it is impossible to store gas. The cost of building holders to store any quantity of gas would run up into a very large investment, and that perhaps would only take care of it for a very short period. It is really impracticable to do it.

Q. Now, Mr. Jones, you have enumerated the number of consumers that are supplied by your company in these various cities. State, if you know, how many people are dependent upon the natural gas supplied by your company in these various cities.

A. I should judge about 475,000; approximately that.

Q. And if your supply of gas from West Virginia was curtailed by reason of the putting into force of the Act in question here, what would be the result of that on your company as a company and your consumers and those dependent upon your company.

Mr. Blue: The State of West Virginia objects to the foregoing question for the reasons, among others that the witness is not competent to answer the question, and secondly it calls for a construction of the Act not warranted by the terms of the Act. The question calls for an answer that is, in its nature, speculative, and further the

question is incompetent, improper and irrelevant and as call-
1410 ing for a legal conclusion by the witness.

The Commissioner: Note the objection and let the witness answer.

A. The service, as I have stated, would be very unsatisfactory and very hazardous. The consumers would be limited to gas for cooking and lighting and heating hot water. It would be necessary for them to provide other means for taking care of their comforts in the way of heating. As I stated, the earnings of the companies depend upon the volume. If the volume is very materially reduced, or is materially reduced, it would necessitate either much higher rates or the bankruptcy of the companies.

Q. Assuming that the supply was entirely shut off from your company what would be the result on your company and the result on the consumers and those dependent upon your service?

Mr. Blue: The State of West Virginia objects to the foregoing question for the reasons heretofore given.

The Commissioner: Note the objection and let the witness answer.

A. If the gas were cut off entirely the companies would be put out of business, would lose their investment, or would have to proceed to erect manufacturing plants and produce manufactured gas
1411 and distribute the same to the people of the different cities.

Q. Now, Mr. Jones, in case your company did resort to the manufacture of artificial gas, how would the facilities you have for the distribution of natural gas be utilized, or could they be utilized in their present form?

A. Partially so; to what extent would depend entirely upon a very thorough investigation and experience in some cases after you would undertake to distribute artificial gas. Ordinarily natural gas distributing systems are not so laid that they can be used for the distribution of artificial gas. There is more or less condensation with artificial gas which must be taken care of. Lines must be laid to grade, dripping to certain points where the condensation can be removed.

Q. Can you state the total amount of gas supplied to your consumers during the past five years, giving the years from 1915 on?

A. I can state the amount of gas purchased by the different companies during those years and distributed in the different cities.

Q. I wish you would state that please.

A. For the year ending March 31st, 1915, in the City of Columbus, there was delivered 7,186,370,000 cubic feet; in the City of Springfield; 1,310,515,000 cubic feet. 1916,—this is March 31st, 1916——

1412 Mr. Blue: You did not give Dayton.

Witness: We did not have Dayton that year and I have not the record of it.

Mr. Blue: All right.

Witness: 1916—Columbus, 7,836,869,000 cubic feet; Springfield,

1,476,898,000 cubic feet. I have no record for Dayton for that year either.

1917—Columbus, 9,139,689,000 cubic feet; Dayton, 3,158,040,000; Springfield, 1,779,488,000 cubic feet.

1918—Columbus 10,656,209,000 cubic feet; Dayton, 3,787,926,000 cubic feet; Springfield, 2,151,710,000 cubic feet.

1919—Columbus, 9,385,064,000 cubic feet; Dayton, 3,886,965,000 cubic feet; Springfield 1,778,095,000 cubic feet.

1920—Columbus, 9,900,467,000 cubic feet; Dayton, 3,487,583,000 cubic feet; Springfield, 1,907,139,000 cubic feet.

Q. Mr. Jones, can you state the amount of gas furnished by your company to the State Institutions here in Columbus and elsewhere throughout the state where you serve them?

A. I cannot definitely.

Q. Can you procure that information?

A. I think perhaps I can, yes, sir.

Mr. Price: I believe that is all.

1413 Cross-examination.

Mr. Blue:

Q. To make clear I will ask you what company furnishes the City of Columbus with natural gas.

A. The Columbus Gas and Fuel Company and the Federal Gas and Fuel Company are the distributing companies. They purchase their supply from The Ohio Fuel Supply Company at or near the City limits.

Q. And who is the owner of The Columbus Gas and Fuel Company and The Federal Gas and Fuel Company?

A. The Pure Oil Company.

Q. And when did The Pure Oil Company acquire The Columbus Gas and Fuel Company and The Federal Gas and Fuel Company?

A. In 1914.

Q. Do you know when The Columbus Gas and Fuel Company began furnishing consumers of gas in the City of Columbus with gas?

A. In 1888 or 1889, I am not positive.

Q. Do you know when The Federal Gas and Fuel Company began furnishing gas to consumers in the City of Columbus?

A. No; I cannot say definitely. My recollection is about 1898.

Q. Did The Columbus Gas and Fuel Company supply consumers in the City of Columbus with natural gas in 1888 and 1889 and for the years subsequent to that?

A. Well to clear that up, The Columbus Gas and Fuel Company under that name was organized in 1907. Prior to that my
1414 recollection is, it was The Central Ohio Natural Gas Company from about 1888 or 1889——

Q. Well, The Central Ohio Natural Gas Company then was supplying natural gas to consumers in Columbus in 1888 or 1889?

A. Yes, sir.

Q. Was that company organized for the purpose of supplying natural gas to consumers in the City of Columbus or for the purpose of supplying artificial gas to the citizens of Columbus?

A. Natural gas.

Q. Do you know whether, prior to that time, artificial gas had been furnished to consumers in the city of Columbus?

A. Yes, sir; it had.

Q. By what company?

A. The Columbus Gas Company.

Q. Was there any relation or connection of any kind between that artificial gas company and the company that later furnished natural gas to the consumers in the City of Columbus.

A. None that I know of until, as I stated, 1907 they were consolidated into The Columbus Gas and Fuel Company—1906 or 1907.

Q. And did that company furnish artificial gas to consumers in Columbus?

A. After the consolidation do you mean?

1415 Q. Yes.

A. For a short period and for a small number of consumers; it was a very small number.

Q. Did your company acquire the artificial plant?

A. We took the entire property, yes, sir.

Q. Where was the gas produced that furnished the consumers in The City of Columbus in the years 1888 and 1889 and immediately subsequent thereto?

A. Down near Lancaster, in the Clinton Gas Field of Ohio.

Q. For how many years did that field supply gas to the consumers in the City of Columbus?

A. The Clinton Field supplied The Columbus Gas and Fuel Company up until the contract with The Ohio Fuel Supply, which was April 1, 1914.

Q. Was that the single and sole source of supply of natural gas for consumers in the City of Columbus up to the time you have just mentioned?

A. At times they purchased some gas in the winter time from the Ohio Fuel Supply Company—emergency gas.

Q. But otherwise from the Clinton Field?

A. Otherwise from the Clinton Field, yes, sir.

Q. Is the Clinton Field still producing gas?

A. Some, yes.

Q. Where is it being marketed?

A. I presume some of it comes to Columbus, I don't know.

Q. Is that field nearing exhaustion?

1416 A. From all reports that I have been able to get, it is. I am not familiar with the producing end.

Q. Was it a good gas field at one time?

A. Considered so; very good.

Q. Sufficiently ample to supply the needs of the Company furnishing consumers of natural gas in the City of Columbus?

A. Yes, sir.

Q. And what is the name of the Company furnishing consumers of natural gas in the City of Dayton?

A. The Dayton Gas Company.

Q. And as we understand it, your company acquired that company?

A. Yes, sir.

Q. Do you know when natural gas was first furnished to consumers in the City of Dayton?

A. No; I think originally the gas supplying Dayton was from the Trenton field—the Trenton sand field in northwestern Ohio.

Q. Do you know whether, previously to the use of natural gas in Dayton, whether there was an artificial gas plant there?

A. There was.

Q. Do you know whether the pipes and other appliances of that artificial company were used later for the delivery of natural
1417 gas to consumers in Dayton?

A. I think perhaps there may be, I would say thirty to thirty-five per cent of the consumers were supplied through lines formerly supplying artificial gas.

Q. You have said that the natural gas consumed in Dayton came from the Trenton F[illegible]d

A. That is my rec[illegible]ection.

Q. In northwestern Ohio?

A. Originally, yes, sir; later from the Clinton field.

Q. How long did the Trenton field supply natural gas to consumers in The City of Dayton?

A. I could not answer that.

Q. Does the Trenton field supply natural gas to the City of Dayton at this time?

A. No, sir.

Q. What has become of that field?

A. It is practically depleted, if not entirely so.

Q. When did the Trenton field become practically depleted?

A. I could not answer that.

Q. Approximately how long ago?

A. It was before my coming to Ohio and I never investigated it.

Q. When was natural gas first delivered to consumers in the City of Springfield?

A. I could not answer that.

Q. Your company was not the first company to deliver natural gas to Springfield?

A. No, sir.

1418 Q. It was being delivered there by the company that your company took over?

A. Yes, sir.

Q. Do you know where the gas was produced that first supplied consumers thereof in the City of Springfield?

A. My understanding is that they also acquired gas from the Trenton Gas field originally and later from the Clinton field.

Q. Then, Mr. Jones, the plants that were put in in the cities of Columbus and Dayton and Springfield for the purpose of supplying natural gas to consumers in those cities were put in to deliver gas to

said consumers, from the Clinton and Trenton fields in the State of Ohio?

A. My understanding is that is where they received their supply first.

Q. And those plants were not put in nor the investments were not made in those plants for the purpose of supplying citizens and consumers in the cities named with gas from the West Virginia fields?

A. Not originally.

Q. Are the public buildings and public institutions referred to in your direct examination located in or near the cities of Columbus, Dayton and Springfield?

A. I think in practically every instance they are within the city limits.

Q. Do you know whether they were being furnished with natural gas during the days when the Clinton and Trenton Fields
1419 were furnishing gas to the companies delivering it in the cities, of Columbus, Springfield and Dayton?

A. Some of them likely were; others were not.

Q. What were the institutions not being furnished with gas, or what fuel were the institutions not furnished with gas, using?

A. Some of the institutions that I referred to have since been established in those cities.

Q. The distributing companies in the three cities to which you have referred turned to the Ohio Fuel Supply Company for gas after the exhaustion of the Clinton and the Trenton Fields, did they not?

A. When we entered into the contract with The Ohio Fuel Supply Company there was no gas being received from the Trenton Gas Field. The Columbus Gas and Fuel Company was producing gas in the Clinton field, which at that time they disposed of to the Ohio Fuel Supply Company and as stated, secured the Federal Gas Company and other contracts in the City of Columbus and the suburbs thereof. As to the supply at Springfield I believe they had been receiving gas from The Ohio Fuel Supply Company; that is the Springfield Gas Company had been receiving gas from The Ohio Fuel Supply Company for ten years prior to the time that we secured that property.

Q. Did The Ohio Fuel Supply Company take over the
1420 Trenton Field also?

A. We had no interest in there.

Q. You stated on direct examination that the Dayton Gas Company purchased gas from The Logan Natural Gas and Fuel Company. What was the Logan Natural Gas and Fuel Company, and at what point did The Dayton Gas Company purchase gas from the Logan Natural Gas and Fuel Company?

A. Near the City Limits.

Q. What is The Logan Natural Gas and Fuel Company?

A. The Logan Natural Gas and Fuel Company is both a producing, distributing and wholesaling company as I understand it.

Q. Where is it producing?

A. I think it produces chiefly in Ohio, if not entirely so.

Q. Is the Logan Natural Gas and Fuel Company furnishing gas to consumers either directly or indirectly in the City of Dayton at this time?

A. The Dayton Gas Company distributing all the gas within the City of Dayton, secures its supply from The Logan Natural Gas and Fuel Company at the city limits.

Q. Well, is the quantity of gas furnished by the Logan Natural Gas and Fuel Company sufficient to supply all of the consumers of natural gas in the City of Dayton?

A. Not an adequate supply in cold weather.

Q. Otherwise is it sufficient?

1421 A. Except in the cold weather, yes, sir.

Q. In what counties, in the State of Ohio, does the Logan Natural Gas and Fuel Company find and produce natural gas?

A. I do not know.

Q. You have given, on direct examination, the number of consumers in the cities you serve in the State of Ohio, and by the statement you have given the total number of consumers in 1920 is 112,633, that being the highest number of consumers during any year in your statement. Can you state, approximately at least, the number of consumers of fuel of all kinds for domestic purposes in the cities of Columbus, Dayton and Springfield; take for instance the year 1920?

A. Domestic consumers only?

Q. Yes.

A. I should state about 90 per cent of those were strictly domestic consumers; home consumption.

Q. Well, what I am asking though is this, how many consumers of fuel of all kinds, gas, coal and any other fuel would you say are in the three cities of Columbus, Dayton and Springfield, for domestic purposes?

A. I don't know just whether I get your question.

Q. Well, I will make it clearer by asking you whether all of the consumers of fuel in the cities named are furnished with natural gas?

1422 A. All the consumers are furnished with natural gas, yes, sir.

Q. No; I have not made it clear to you yet——

A. If you mean for heating entirely why I would be unable to answer that whether they depend entirely upon gas for heating.

Q. I will ask you the question in another way. You stated on direct examination that the number of persons depending upon gas in the three cities named was 475,000; how many people are dependent on fuel of all kinds in the three cities?

A. Oh, I don't know; there would be perhaps 500,000 or 510,000. I am taking the cities and the suburbs and so forth.

Q. How many people are there in the City of Columbus depending upon fuel?

A. Well, there are 62,000 consumers all told; fifty-six thousand and some purely home consumption.

Q. What is the population of Columbus?

A. I think the last census was 237,000 or 240,000.

Q. When you gave your figure 475,000 you meant to include the entire population of Dayton, Columbus, and Springfield and the suburbs?

A. Yes, sir.

Q. Well, does the entire population of those three cities use gas as fuel?

A. Practically so. There may be some few who do not.

1423 Q. Those that do not have natural gas use coal for fuel?

A. Undoubtedly so.

Q. You have given the number of—or rather you have stated the percentage, but not the number; you have stated the percentage of gas used, but not the number of industrial consumers in the cities you served. Can you state the number of industrial consumers of your company in the three cities?

A. What do you mean by "Industrial consumers," if I may ask that question?

Q. That is entirely proper; I mean for manufacturing purposes.

A. I could not exactly say, no, sir. When I stated about 90 per cent were domestic consumers, the other ten per cent are all classes that are not strictly home consumption. That would include manufacturers and stores and offices and all other consumption.

Q. Well, you could make up a statement could you not showing the number of factories, manufacturing plants to which you are furnishing natural gas for fuel?

A. Yes, sir.

Q. We will ask you to do that.

A. Do you want all classes regardless of the size,—I mean of manufacturing consumers?

Q. Yes, and stating the character, in a general way, of each of these plants, and I will ask you for how many years you

1424 can, yourself, furnish such a statement.

A. Well, it would be a little difficult because the larger number are small factories or manufacturing establishments which we did not keep a separate account of, but for the year ending March, 1920, we went through and listed those, the small and the large.

Q. We have some misunderstanding among ourselves here as to whether you said that 90 per cent of your consumers were domestic or whether you said that 90 per cent of your gas was consumed by domestic consumers and we will ask you to state which way that is.

A. 90 per cent of the consumers are purely domestic consumers, home consumers.

Q. How much of your gas was used, say in the years, 1919 and 1920, by industrial consumers?

A. Now, as I understand, you mean strictly manufacturing consumers?

Q. You may answer it that way, or you may answer it in the

way that your company has classified, itself, industrial consumers.

A. My recollection is that purely manufacturing, about nine or ten per cent. All non-domestic runs from 20 to 25 per cent.

Q. Now, what does that classification of 20 to 25 per cent include?

1425 A. It includes everything that is not strictly home consumption.

Q. In making up your statement will you include in it the information as to the part of your gas that has been consumed for industrial purposes for the years that that statement may cover?

A. I will be glad to do that, but it will take sometime, as I stated before, for the years previous to the year, ending March 31, 1920, because we will have to go through all the accounts and segregate them, which we did not have prior to that time.

Q. In view of what you have said in your last answer as to the difficulties you will have to furnish the information, I will ask you if you can state approximately the part of your gas for the years 1915, 1916, 1917, and 1918 consumed for industrial purposes.

A. I think that my judgment would be that it would be approximately the same as it was the previous years; it may be a little higher the previous years than for the last year.

Q. That is you mean it is about the same or a little higher than it was for the year 1919?

A. Yes, sir.

Q. And in respect to which you have answered?

A. Yes, sir.

1426 Q. I mean in respect to which year you have answered.

A. Yes, sir.

Q. In view of the statement you have just made then we will not ask you to go to the difficulty of setting out this information in the statement called for.

A. Thank you.

Q. We will excuse you from that.

A. Thank you.

Q. On your direct examination you stated, as we understood you, that about 30 per cent of your consumers, in the cities you supply use fuel other than natural gas for heating, although using natural gas for cooking and lighting. If we have misunderstood your answer we will ask you to correct us or to make clear what you had in mind when you made the statement to which we refer in this question.

A. That statement should pertain particularly to Columbus. My statement was that of our domestic consumers, as near as our records show, and which were taken during the last winter, that there are about 30 per cent of the consumers who are heating their homes with furnaces; of that 30 per cent who are heating their homes with furnaces about 25 per cent are strictly gas furnaces. Of the others, some are coal furnaces in which gas burners have been placed, and some undoubtedly are using coal entirely

1427 for heating.

Q. Then you mean two things; that the houses in the first instance were built with—some houses were built with coal furnaces in which gas burners were afterwards placed.

A. Some of them, yes, sir, and some of them in which there were no burners placed.

Q. Those in which gas burners were placed can be very easily converted back to coal furnaces?

A. Yes, sir.

Q. And then you have a certain part of your consumers in Columbus who use gas for cooking and lighting, using coal, however, as a fuel in their furnaces?

A. A certain percentage. The balance,—the 70 per cent of the domestic consumers we have not a complete record of, but so far as we can tell they use gas through heaters, grates and stoves.

Q. Now, many of these houses to which you referred on your direct examination were built prior to the furnishing of natural gas as a fuel in the cities to which you have referred?

A. Yes, sir.

Q. In fact a very large proportion of the houses in these cities were built prior to the bringing of natural gas into the city?

1428 A. I think not. These cities have increased very rapidly in the last ten to twenty years in population.

Q. While that is true, yet at the same time they were considerable cities before natural gas was brought into them at all.

A. Yes, sir, but——

Q. They were in fact rather good sized towns and cities before gas was brought into them?

A. Yes, sir.

Q. And the houses were built for the purpose of using coal as fuel?

A. Those at that time were, yes, sir.

Q. And many of the houses that have been built since, as we understand you, put in furnaces for the use of coal, some of which have been used or equipped for the purpose of using gas as a fuel by putting gas burners in them, and many of them were using coal and have been using coal from the beginning.

A. Undoubtedly so.

Mr. Blue: That is all.

The Commissioner: Are you through with the witness?

Mr. Blue: Yes, sir.

Here a recess was taken until 2:00 o'clock P. M.

1429 COMMONWEALTH OF PENNSYLVANIA and STATE OF OHIO

VS.

STATE OF WEST VIRGINIA.

Tuesday Afternoon, July 20, 1920.

And now, the hour of 2:00 o'clock P. M. Having arrived, hearing resumed pursuant to recess.

T. J. JONES resumes the stand.

Redirect examination.

Mr. Weil:

Q. Mr. Jones, you testified this morning that the original investment made by those respective companies in their plant and so forth was made with reference to the gas fields in Ohio. I wanted to ask you if in addition thereto, subsequently, on account of a contract made for West Virginia gas, any extensions were made to those investments and enlargement of plant and so forth?

A. There are extensions being made each and every year for the enlargement of the properties. After making our contract at Dayton we laid a sixteen-inch line to connect with their line and our city lines, and other extensions have been made. At Springfield we laid about eleven miles of ten-inch line to connect with the measuring station of The Ohio Fuel Supply Company and the city lines at Springfield, and, of course, within the cities, there are extensions being made each year.

1430 Q. When was this change made, from the supply of your own plants, from the local Ohio fields to the supply from West Virginia—how long ago?

A. We entered into our contracts with The Ohio Fuel Supply Company for Columbus as of April the first, 1914. For Springfield, as I recall, November, 1914, and for Dayton with the Logan, I think it was June, 1916. Prior to that time Springfield was being served by The Ohio Fuel Supply Company and the Dayton Gas Company was being supplied by the Logan Natural Gas and Fuel Company, and a portion of the city of Columbus was being supplied by The Ohio Fuel Supply Company.

Q. That is prior to the dates that you have given?

A. Yes, sir.

Q. And can you approximately give us about how long prior to that time—just about the time; I don't care for the exact date?

A. My recollection is that The Ohio Fuel Supply Company came into the city of Columbus about 1902 or 3. I may be wrong as to a year or so there. I understand that Springfield was receiving a supply from The Ohio Fuel Supply Company for ten years prior to that time. How long Dayton had been receiving gas from the Logan, I am unable to state.

Q. And these companies, if I understand you correctly, were drawing their supplies from West Virginia?

1431 A. The gas supplied by The Ohio Fuel Supply Company at Columbus and Springfield was partially, at least, from West Virginia, is my understanding. And the entire supply of the Dayton company as supplied by the Logan Natural Gas and Fuel Company, was coming from West Virginia.

Recross-examination.

Mr. Blue:

Q. These extensions you referred to in your redirect examination, you mean the extensions made from year to year were the natural extensions with the growth of the business that they got?

A. The natural growth of the business and the lines at Dayton and Springfield were for the purpose of supplying a larger supply to the cities.

Q. And these extensions were going on before your company or your company's predecessors began getting any gas from West Virginia?

A. Undoubtedly there were some, yes, with the growth of the cities.

Q. So these extensions were not made upon the basis of your getting gas from the State of West Virginia; that is right, isn't it?

A. No, not entirely.

Q. Wherein is it not right?

A. At Dayton we were getting our entire supply from the
1432 State of West Virginia.

Q. When did you begin getting this entire supply from the State of West Virginia for Dayton?

A. We have since we secured the property.

Q. Well, I mean when did Dayton begin?

A. I couldn't tell you that.

Q. Well, was it getting any before the time you have just referred to when you say that you or "we" were getting our entire supply from West Virginia?

A. Yes, sir, we were receiving gas prior to that.

Q. How much?

A. Their entire supply for the consumers that they were supplying in the city of Dayton.

Q. When did Dayton begin receiving West Virginia gas?

A. I could not answer that.

Q. Have you any idea?

A. No, sir.

Q. Do you know that they were getting any?

A. My understanding is that——

Q. Well, do you *know* that it was getting any?

A. No, other than what I have been told.

Mr. Blue: The State of West Virginia moves to exclude the answer of the witness in so far as he has stated in response to the last
1433 question or any previous question respecting the supply of gas for the city of Dayton, for the reason that the witness has just stated that he does not know when the city of Dayton began getting gas from the State of West Virginia, the quantity or the amounts thereof.

The Commissioner: Note the motion.

Q. To your knowledge you can not say and you do not say, as we now understand you, that the city of Dayton is or has been getting any gas from the state of West Virginia, is that not right?

A. If you mean by that that I know that the gas that is supplied at Dayton actually comes from the State of West Virginia, through experience, knowing the production and transportation ends, yes. All that I know is that our contract specifically states that the gas comes from the state of West Virginia.

Q. You mean then by your answer that you do not know of your own personal knowledge whether the gas does or does not come from the state of West Virginia?

A. To the extent that I stated, yes.

Q. And do you know now that the gas supplied the city of Springfield comes from the state of West Virginia?

A. Not as I stated before, from personal contact with the gas in the production and transportation of it.

1434 Q. Do you know that the gas supplied to the city of Columbus comes from the state of West Virginia?

A. No, sir, not to that extent, because I am not in the producing end, nor in the transportation end.

Mr. Blue: The State of West Virginia moves to exclude all of the evidence of the witness, in so far as the witness has stated that the gas supplied the cities of Columbus, Springfield and Dayton comes from the state of West Virginia, in view of the statement just made by the witness that he has no personal knowledge respecting this matter.

The Commissioner: Note the motion.

Attorney General Price: Will you read the motion, please.

(The motion was read.)

Mr. Weil: In reply to that motion, the witness stated that he obtained part of his information from contracts made for West Virginia gas, and part of his information from the records of the company. His answer to the question was that he didn't have any personal knowledge of the fact of where any molecule of gas came

1435 from, as he was not connected with the producing and transporting end.

Q. In view of your statements, you would not attempt to state the quantities thereof, if any quantities at all, that come from the state of West Virginia and consumed in the cities of Columbus, Dayton and Springfield?

A. I would be unable to say, as I said, from personal experience, what quantity of gas comes from West Virginia that is distributed in the cities of Columbus and Springfield, also in the city of Dayton, other than our contract specifically states that the gas we receive at Dayton comes from West Virginia through contracts held by the Logan Natural Gas and Fuel Company.

Q. And those contracts were made 1914 or '15?

A. '15 or '16 at Dayton.

Q. 1915 or '16?
A. At Dayton. The others were 1914.
Q. And for many years previously thereto these cities had been furnished with natural gas by the predecessors of your company?
A. Yes, sir.
Q. Gotten from fields within the state of Ohio?
A. In and out to the best of my knowledge.
1436 Q. In so far as out of the state of Ohio, what is your knowledge as to the fields from which the gas was produced and the quantities coming out of the state fields?
A. Nothing more than what I have already stated.
Q. I don't believe that you have stated anything in respect to any quantities that were delivered to consumers in the cities named by you, as coming from without the state of West Virginia prior to the time of these contracts that you have referred to in 1915-16; is that not right?
A. I don't know whether I understood your question.

Mr. Weil: No, you are mistaken about that, Senator.
Mr. Blue: Well, if I am I will just withdraw the question.

Q. What gas within your knowledge was furnished to the consumers in the three cities named by you, that came from the state of West Virginia, prior to the time of the contracts of 1915 and '16?
A. I am unable to state.
Q. Do you know that there was any?
A. Only as I have been told by the producing or transporting companies—the wholesale companies.

Mr. Blue: The State of West Virginia renews its motion to
1437 strike out the testimony of this witness in so far as the witness has attempted to say, or his testimony can be construed as meaning, that West Virginia gas has been delivered to consumers in the cities of Columbus, Springfield and Dayton.

The Commissioner: Note the motion.
Mr. Weil: Nothing more.
The Commissioner: Anything further? You are excused Mr. Jones; but, Mr. Jones, you will furnish the information that you took memorandum of?
Mr. Jones: Yes, sir.
The Commissioner: Will you want Mr. Jones back after you have examined that?
Mr. Blue: I don't think so.
Mr. Johns: If so he can be recalled.
The Commissioner: Is it agreeable that he can be recalled if they want him?
Mr. Eagleson: Yes, certainly.
Mr. Commissioner, I have a letter from Mr. M. B. Daly, who testified in these cases at Pittsburgh, which letter I have sub-
1438 mitted to counsel for the State of West Virginia, and they very kindly consent that I read from this letter the following language into the record:

"In my testimony at Pittsburgh I stated that there were approximately ten thousand artificial gas consumers. We find upon investigation that there are about 3,200. I got confused owing to the fact that we had about 7,000 street light contracts, but I find these lights are supplied with natural instead of artificial gas."

The Commissioner: Let the statement be taken by the consent of counsel on the other side.

Mr. Eagleson: This, as counsel will remember the record, has particular reference to the city of Cleveland.

L. B. DENNING, a witness produced on behalf of complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Eagleson:

Q. State your name and place of residence.

A. L. B. Denning, Pittsburgh, Pennsylvania.

Q. Mr. Denning, what is your present connection, if any, with the natural gas industry, and with particular reference to The Ohio Fuel Supply Company?

1439

A. Vice-President of The Ohio Fuel Supply Company.

Q. Any other position in connection with that company, or office?

A. Not of The Ohio Fuel Supply Company, no, sir.

Q. You are not a director?

A. Oh, yes, if you mean that—yes, a director.

Q. How long have you been connected with The Ohio Fuel Supply Company?

A. I have been identified with the gentlemen who organized The Ohio Fuel Supply Company for some months prior to its organization. I have been actively identified with it in some form or other since its organization in 1902.

Q. What relationships have you held with The Ohio Fuel Supply Company since 1902, and state in connection with that answer the nature of your duties and services rendered?

A. From 1902 to 1910 I had the relation of counsel in the Southern District of Ohio, having general charge with their public relations, franchise work, rate matters and matters of similar nature. On March the first, 1910, became their general counsel and a director. On May the first of 1918, I became assistant to the president and secretary of the company and a director. In June of this year I became vice-president. It would be rather hard to make a classification of my duties as vice-president. During my time as assistant to the president I was directly responsible and answerable only to the president in matters in relation to carrying out company policy and matters that fall to the chief executive of a corporation of that kind. Since becoming vice-president my duties have been very much the same.

1440

Q. During the time of your connection with this company, have you had a part to do with or supervision of the production, trans-

portation and distribution of gas, either produced or acquired by this company and distributed to consumers?

A. More or less to do with all those matters.

Q. Then may I ask if you are as a result of this experience familiar with the different phases of the company's business?

A. I think I am.

Q. Have you a map, Mr. Denning, of the transportation lines and property of The Ohio Fuel Supply Company?

A. Yes, sir, right here.

Q. Please produce it.

A. (Here witness does as requested.)

Q. I ask you to examine this map which may be marked
1441 for identification Ohio Exhibit Number 2, and ask you to state in a brief and general way, what it purports to represent?

(Map marked "Ohio Exhibit No. 2.")

A. It represents the main trunk lines and transmission lines of The Ohio Fuel Supply Company, together with the various communities to which it is obligated to supply gas either directly to its own consumers, or through contracts which it has with other distributing companies and municipalities in Ohio.

Mr. Eagleson: We offer in evidence "Ohio Exhibit Number 2."

Q. Mr. Denning, in addition to the representation on this map of The Ohio Fuel Supply Company's lines and property generally, does it not also indicate the lines, especially the main transportation lines, of the Northwestern Ohio Natural Gas Company, and if so state briefly that representation on the map.

A. It shows on this map the line of the Northwestern Ohio Natural Gas Company from the compressing station at Sugar Grove where we receive the delivery of gas which is delivered at Toledo, or distributed at Toledo, from Sugar Grove to Toledo. It does not show, however, the connecting line between the Sugar Grove station of the Northwestern into West Virginia, because this map displays only lines owned by The Ohio Fuel Supply Company or lines
1442 under its control. The red line shown here as line E from the Ohio River to Sugar Grove is The Ohio Fuel Supply Company's line from Sugar Grove to West Virginia and has no relation whatsoever to the connecting link between Sugar Grove and the Northwestern on one hand and its supply from West Virginia on the other hand.

Q. Is Sugar Grove located on this map near the designated place called Horn's Mills, at the star?

A. Yes. The legend here gives the star indicating compressing station. The star at the junction point marked Horn's Mills indicates Sugar Grove. The star immediately below that, is another smaller compressing station which we use, as what we call a booster station.

Q. Now is that the second or the third star?

A. Both the second and third stars are smaller compressing units, used to pick up gas and to deliver up to the larger compressing station. The Sugar Grove compressing station handles not only the gas for The Ohio Fuel Supply Company system but the gas for the Northwestern Ohio system, as well.

Q. You note, Mr. Denning, in the legend of this map here it refers to Wheeler Compressing Station and also to Laurel
1443 Compressing station?

A. Yes, sir.

Q. Pine Grove Compressing station and Creola Compressing station?

A. Yes.

Q. But that does not refer here to——

A. Sugar Grove.

Q. To Sugar Grove.

A. Well, when I say Sugar Grove, it really is Wheeler station; Wheeler station is the name of the station; Sugar Grove is the name of the place where the station is located.

Q. Is there any other compressing station on the system?

A. Yes, there are several.

Q. Well, while you are discussing compressing stations, just locate them all.

A. Well, Treat Compressing station, located at Homer, in Knox county, Ohio, is the main compressing station for the northern section of Ohio-produced gas. That is assisted and helped out by a compressing station at Perrysville, which is further north, and the Ashland Compressing station, which is still further north. On the Northwestern Ohio system there is an additional compressing station at Tonkin, which is much farther north on the Northwestern lines.

1444 Q. What have you to say as to the compressing station over on the eastern part of the system designated as Elk Compressing station?

A. Well, that is just simply a small pick-up station in the field; it is of importance locally only. The two main stations are the Treat station at Homer and the Wheeler station at Sugar Grove. Both of those stations are——

Q. How do you designate Homer on this map?

A. I don't think it is shown "Homer"; I think it is simply shown Treat station.

Q. That is practically due north of Sugar Grove?

A. Yes.

Q. Or Wheeler station?

A. About forty or forty-five miles due north of Wheeler station, Sugar Grove.

Q. Now, Mr. Denning, beginning down on the river in the Southern part of the state, below Chester, I wish you would take the pipe line of your company and describe that as you go northward, and in a brief, concise way, describe your pipe line system, giving dimensions of the pipes, with particular reference to the main and transportation lines, giving their dimensions as well, and distances?

1445 A. Well, there are, generally speaking, two main transmission systems. Bringing gas from West Virginia, we take the gas from the United Fuel Gas Company on the Ohio Side at the point where the map shows the junction line on the Ohio side of the river. It is then transported through an eighteen inch line a little over sixty-three miles until it reaches Sugar Grove or Wheeler station at Sugar Grove. The gas brought from West Virginia is there mingled into gas coming up from Vinton county through this due north and south line extending from Sugar Grove—the gas is there mingled with that gas and becomes a part of the general gas supply at that point. The line from Wheeler to Gahanna running in a general north-westerly direction from Wheeler is a West Virginia line.

Q. Where is Gahanna, Mr. Denning?

A. Gahanna is just a short distance east of Columbus. And is the main feed supply line for gas from that section into Columbus city. The other general transmission system begins away up northeasterly, above the point marked "Ashland Compressing station," and gas is brought on down into Treat Station at Homer, and then sent down to Zanesville; and into what we term the Cincinnati eighteen inch line, which extends from the Treat Compressing station at Homer to Cincinnati and is this line which is shown extending down to Cincinnati. Coming back to what might be called the South-

1446 ern system, we have line Y, 20 inch, which is a double—another line lying alongside of our West Virginia 18 inch, which takes gas from that particular section of the country and brings it up to Wheeler. Line S from Wheeler to Gahanna is 16 inch. Then there is another line, branching off the West Virginia 18 inch line.

Q. Can you give those distances approximately, Mr. Denning, as you go along?

A. Well, now, yes, the 18 inch line from the Ohio River to Sugar Grove, Line E, is 63.9 miles. Line Y, 20 inch from Union Furnace to Sugar Grove is 20.21 miles. Line S from Sugar Grove to Gahanna, 16 inch, is 33.3 miles. The other line I was just going to refer to, which leaves the West Virginia 18 inch near Chester and extends over to Pomeroy, is 7.4 miles. In connection with that is a further extension which parallels the Ohio River to Gallipolis, and then extends north-westwardly up into Jackson county, reaching the towns of Jackson and Vinton counties and fed from this West Virginia line, is about thirty-five to forty miles in length.

Q. What is your connection or service, if any with Point Pleasant?

A. The Ohio Fuel Supply Company owns The Point Pleasant Natural Gas Company and takes gas back into West Virginia to supply Point Pleasant.

1447 Q. Just state a little more in detail where it gets that gas and what transportation there is in connection with that gas back to the consumers in Point Pleasant.

A. The gas distributed in Point Pleasant by The Point Pleasant Gas Company comes from West Virginia, from the United Fuel Gas Company, is transported to the connection at Chester, passes through the Pomeroy and Gallipolis line until it reaches the connection, the

connecting line to Point Pleasant, and is then transmitted across the river and distributed there to consumers in Point Pleasant, being entirely West Virginia gas.

Q. Pardon me, did you state whether or not Point Pleasant is in West Virginia?

A. I did.

Q. Or in the state of Ohio?

A. It is in West Virginia.

Q. Now, from Gallipolis, in a northwesterly direction, up to your Jackson division, supplying Jackson, Wellston and other municipalities there; is that exclusively West Virginia gas?

A. The gas passing through that line is exclusively West Virginia gas, yes, sir. There is some gas coming into those towns from a local field, however, so that I don't want to be understood as saying
1448 that those towns are entirely dependent on West Virginia gas, but the gas passing through that line and the greater proportion of the gas distributed in Wellston, Jackson, Glen Roy, and Hamden comes from West Virginia.

Q. Well, now take the division from the Sugar Grove, from the Wheeler compressing station that runs apparently due south down to Allensville and to McArthur, describe that division briefly?

A. That is what we would call an intake or suction system that is used for transporting gas produced in Ohio in the northern part of Jackson county and the southern part of Vinton county, bringing it up to Wheeler station at Sugar Grove.

Mr. Blue: Would you mind reading that question?

(Previous question read.)

Q. Now, Mr. Denning, take from the Wheeler compressing station running across in a northeasterly direction to Zanesville, and describe that main transportation line to and on beyond Zanesville, and its function?

A. Well, to Zanesville it has one function and beyond Zanesville another. From Wheeler station, it is used as a discharge transmission line, which supplies the towns you see indicated on the map, and also a portion of the supply of Zanesville and the
1449 towns on the connecting lines south of there. Beyond Zanesville the gas flows in the opposite direction. These lines over here are lines which pick up the gas produced in that section.

Q. When you say "over here" where do you mean, Mr. Denning?

A. The area beyond, east of Zanesville.

Q. Yes, sir.

A. The gas flows in the opposite direction to what it does on the line from Wheeler to Zanesville.

Mr. Blue: In other words it flows west.

A. It flows west, yes. It picks up the gas produced in that section indicated on the map here and supplies these towns which you see indicated, and the surplus, or whatever is left finds its way to augment the supply at Zanesville.

Q. What size line is it from Zanesville back to Wheeler compressing station, if you know?
A. From Zanesville back to the compressing station?
Q. Yes.
A. I really couldn't tell you, Mr. Eagleson, but my impression is, it is either twelve or sixteen inch.
Q. Do you know the distance?
A. No; I should say about forty miles, however; between
1450 forty and fifty miles.
Q. Now, briefly describe your system east of Zanesville, on down into Guernsey, in Belmont and Monroe counties?
A. Well, that is what I referred to when I said the gas flowed from that section west.
Q. Oh, you covered that?
A. I covered that in the answer, or at least intended to do so.
Q. Very well. Now, take up your main transportation lines leaving Wheeler Compressing station, and extending westward and northwestward, finding their terminus at Springfield and Beatty, and beyond, over to Sidney, and describe that division, the distance, the size of lines and the gas transported?
A. There are two lines here, both running generally westerly and then bending up to the northwest, the one line terminating at Springfield and one line terminating at Sidney. The line terminating at Springfield is a line which The Ohio Fuel Supply Company owned for a number of years. The line terminating at Sidney is one which we acquired I think in 1917, by purchase from The Central Contract and Finance Company. The flow of gas as is indicated by the arrow alongside of the indicated line, is from Wheeler station, and the gas is the gas furnished or supplied through those two lines, is the commingled gas coming from West Virginia
and from the Jackson and Vinton fields and pushed
1451 on up into these towns for distribution. As to the sizes of those lines, Mr. Eagleson, and the distances, I could only approximate, as I haven't that data here. I could get it for you, however, if you desire it, and wish it.

Mr. Eagleson: I would like to have that by tomorrow, Mr. Denning.

Q. Describe, Mr. Denning, if you will please, the transportation system that carries gas to Cincinnati in the southwestern corner of the state?
A. That line is 18-inch and begins at the Homer or Treat compressing station at Homer, and extends in a generally southwesterly direction down to Cincinnati, approximately 170 miles.
Q. What is the size of that line, Mr. Denning?
A. 18-inch.
Q. And 170 miles long?
A. Approximately that, yes.
Q. Can you give us the date of its construction?
A. About 1905.
Q. What is the source of the gas which you draw and and trans-

port through that line to the municipalities along the line that you serve, to and including Cincinnati?

A. Two general sources of supply; gas produced in Ohio and that produced in West Virginia.

1452 Q. What are your sources for gas that you distribute to consumers, Mr. Denning?

A. Two general sources, gas produced in Ohio and in West Virginia.

Q. And how do you acquire that gas, by production yourselves or any by purchase, or in what manner, in the different ways that you come in possession of it?

A. Why, Ohio gas is acquired by production of our own. We are very active in drilling a large number of wells, and we purchase all the gas produced in Ohio that we can obtain. Our West Virginia gas is acquired by reason of our contract relations with United Fuel Gas Company.

Q. Now, Mr. Denning, I believe we have gone over the system pretty well, except perhaps the north branch which runs up into the Western Reserve, along in the Ashland fields; I wish you would describe——

A. That is northeast.

Q. In the—well, what do you call that division up in that field?

A. Ashland field.

Q. The Ashland field; describe your transportation there, and what its purpose is?

A. That is generally to be described as intake lines which pick up the gas produced in the Ashland and Wayne and Medina county field, Ohio, and brings that on down through Perrysville and

1453 Ashland compressing stations and delivers it to Treat station at Homer, for transmission generally to the various distributing points.

Q. Mr. Denning, I wish you would describe a little more in detail the route of the gas obtained from the United Fuel Gas Company, down at the river, as it goes to Cincinnati, giving its connection to the so-called Cincinnati line or division?

A. The system generally, Mr. Eagleson, is so arranged as to be interchangeable, or rather I should say, I fancy, inter-connecting. The point being to keep gas flowing to the distributing points as nearly uniform as can be done. Gas received from the United Fuel at its delivery point on this side of the river in Ohio, and coming from West Virginia, passes along through line E, the 18-inch line until it reaches Wheeler station at Sugar Grove. As I explained before, it is there mingled with the other gas which is brought up from Vinton and Jackson counties and the other producing territory in the Sugar Grove field. It then can be thrown in any one of several directions. It can be sent to Zanesville over this line and these intermediate points as shown on the map. It can and is sent to Columbus through the line indicated by red, or through the line indicated by blue. It can in emergency be sent up through

1454 the cross line, clear up to Treat station, so that in the event of an emergency, assuming that Treat station should for some

reason or other be put out of business, we might be able to render some service to this section of the country controlled by Treat station, from Wheeler station; or it can and most usually is taken through one or the other of these cross lines running westerly from Wheeler station, connecting with the Cincinnati 18-inch line, as an additional safeguard, for Xenia, Hamilton, London and Cincinnati, and the intermediate towns supplied.

Q. That connection you last described intersects with the Cincinnati Division line over by South Charleston?

A. Yes, sir.

Q. Is there any gas that goes into this Ohio Fuel Supply line from the river north to the Wheeler station, from the United Fuel Gas Company, that is delivered to or goes on to the northwest up into the system of the Northwestern Ohio Natural Gas Company?

A. Do I understand your question, be any gas received from the United Fuel Gas Company——

Q. Yes.

A. Delivered to the Northwestern?

Q. Yes.

A. There is not. Not under ordinary conditions at all.
1455 Conditions might arise in the event of an emergency where it would be necessary to do that, but——

Q. Well, in case of emergency you would have the facilities whereby you might do that?

A. In the case of emergency it is so arranged that that might be done, but it is not done under ordinary operating conditions, because on the Northwestern we depend entirely for our supply from West Virginia, through the connecting line, which is entirely a separate line, not shown on this map.

Q. Is it a fact, or to what extent is it a fact that your system as described by you, is so intersected that you can by changing or bypassing gas, transport natural gas obtained from the United Fuel Gas Company, in the way you have described, to almost every division of your system in Ohio?

A. Well, the system is so arranged that that can be done, to the extent of the volume and pressure we would have to carry it. I don't mean to say that could be done with all points, because that would be mechanically impossible.

Mr. Weil: Not at the same time.

A. Not at the same time; that would be mechanically im-
1456 possible.

Q. This map, Mr. Denning, does not attempt or purport to show your gathering lines, field lines, connections and so forth?

A. It does not. It simply undertakes to show the transmission system, both main and minor transmission systems and the municipalities supplied.

Q. Can you from memory give in general in a brief way the Ohio gas fields, or territory which The Ohio Fuel Supply Company is operating?

A. Well, I can give it in general terms, Mr. Eagleson, yes. To the northeast, and tributary to the Treat station are two general

fields, known as the Ashland field, which embraces Wayne, Medina—those counties up in that section of the state—and the Knox-Licking field. Then passing over to the line extending eastwardly from Zanesville, there is a relatively small field in that section from which we produce some gas, but not such a very large field. Then to the south of Wheeler station is the Jackson-Vinton, the northern end of Jackson County and the southern portion, relatively speaking, the southern half of Vinton County. Relatively speaking I may say this: there is no gas production of The Ohio Fuel Supply Company at any point west of the main transmission system. Nothing in here at all (indicating), no production. The production all lies east.

1457 Q. That would be no production in territory west of a straight line running north and south through——

A. Well, if you were to take Wheeler station as a starting point and project a line due north, I would say, generally speaking, there is no production west of that line.

Q. Mr. Denning, let me ask you here what the connection if any is between The Ohio Fuel Supply Company and the Northwestern Ohio Natural Gas Company?

A. The Ohio Fuel Supply Company owns all the stock of the Northwestern Ohio Natural Gas Company except directors' qualifying shares.

Q. Can you give us amount of land held by leaseholds of The Ohio Fuel Supply Company in the State of Ohio, and also operated acreage and unoperated acreage, for the period of time, 1910 to 1920, inclusive; and also the gas production in Ohio of The Ohio Fuel Supply Company and the Northwestern Ohio Natural Gas Company, and the totals thereof for the period of time 1910 to 1920, inclusive; and also the gas produced in Ohio by The Ohio Fuel Supply Company and the Northwestern Ohio Natural Gas Company, together with the total of the two for the period 1910 to 1920, inclusive; and in addition give us the gas purchased that has

1458 been produced in West Virginia and transported into Ohio by The Ohio Fuel Supply Company and the Northwestern Ohio Natural Gas Company, and the total of the two for the time 1910-1920, inclusive?

A. The fiscal year of both The Ohio Fuel Supply Company and the Northwestern Ohio Natural Gas Company are coincidental with the Calendar year. I can give you the information you request for the full calendar years from 1910 to 1919, inclusive. The 1920 figures would have to be on the basis of the first five months of the year, because that is the extent to which our accounts have been brought, in that regard.

Q. Will you please give us those figures in answer to that question.

A. —

The Ohio Fuel Supply Company.

The Amount of Gas Production and Lease Holdings in Ohio.

Leaseholds.

	Acres.	
	Operated.	Unoperated.
1910	39,549	414,117
1911	41,222	535,350
1912	45,865	582,722
1913	53,630	402,779
1914	70,407	396,540
1915	74,960	504,403
1916	76,485	434,301
1917	103,040	730,924
1918	114,595	848,446
1919	119,045	865,131
1920 (For five months)	122,506	934,953

1459 *Gas Production.*

	L. F. S. Co. M cu. ft.	N. W. O. N. G. Co. M cu. ft.	Total. M cu. ft.
1910	9,978,844	24,079	10,002,923
1911	9,938,057	20,404	9,958,461
1912	12,761,771	18,886	12,780,657
1913	12,879,098	9,717	12,888,815
1914	13,195,382	9,256	13,204,638
1915	13,967,006	9,219	13,976,225
1916	15,830,681	9,182	15,839,863
1917	20,234,567	7,788	20,242,355
1918	20,536,358	5,255	20,541,613
1919	22,418,827	3,445	22,422,272
1920 (For five months)	12,999,012	2,048	13,001,060
Total	164,739,603	119,279	164,858,882

Gas Purchased—Ohio.

	O. F. S. Co. M cu. ft.	N. W. O. N. G. Co. M cu. ft.	Total. M cu. ft.
1910	4,190,151	.....	4,190,151
1911	3,052,481	92,445	3,144,926
1912	2,822,510	298,961	3,121,471
1913	3,274,072	9,118	3,283,190
1914	5,038,151	65,494	5,103,645
1915	5,637,253	122,746	5,759,999
1916	7,044,858	605,897	7,650,755
1917	5,330,200	331,337	5,661,537
1918	3,842,184	309,331	4,151,515
1919	3,864,509	273,310	4,137,819
1920 (For five months)	2,065,214	523,523	2,588,737
Total	46,161,583	2,632,162	48,793,745

1460 *Gas Purchased—West Va.*

1910	2,852,604	3,494,456	6,347,060
1911	3,989,010	3,730,237	7,719,247
1912	4,683,365	4,162,036	8,845,401
1913	5,045,974	4,585,340	9,631,314
1914	6,952,652	5,114,277	12,066,929
1915	6,846,418	5,128,283	11,974,701
1916	10,002,914	5,296,766	15,299,680
1917	10,753,311	6,347,845	17,101,156
1918	11,500,964	6,059,661	17,560,625
1919	9,455,428	5,709,498	15,164,926
1920 (For five months)	4,674,999	2,553,491	7,228,490
Total	76,757,639	52,181,890	128,939,529

Q. Mr. Denning, can you give us the gas sales of The Ohio Fuel Supply Company in the State of Ohio for the years 1910 to 1920, 1920 being the current year, the first five months of this year, classified as to show the amount sold to consumers for domestic purposes, for public buildings, for industrial purposes and other or miscellaneous, and by wholesale to municipalities and other utilities, number of consumers and the total of the whole, and in each classification giving the number of consumers if you can, and in addition to answering those inquiries give the gas sales of
1461 the Northwestern Ohio Natural Gas Company for the period of 1910 to the end of the fifth month of 1920, inclusive, to the domestic consumers, giving the number of consumers, the amount consumed, industrial consumers and the amount consumed, to consumers other than domestic and industrial and the amount consumed, and the total number of consumers, and the total amount of gas those companies sold?

A. Yes, sir, I have prepared a tabulated statement showing that information, which however, might require a little explanation in order to represent the true conditions. The statement shows domestic number of consumers and thousands of cubic feet, public buildings consumers and thousands of cubic feet, other consumers and thousands of cubic feet, and wholesale municipalities and utilities consumers and thousands of cubic feet. Under the item of "Other" that embraces gas largely used for pumping purposes, free gas consumers by reason of right of way contracts, or something of that nature, and is gas for which no revenue is received. Under the item of wholesale, municipalities and utilities, is embraced the various distributing companies to whom we sell gas wholesale, such as The Columbus Gas and Fuel Company, The Federal Gas and Fuel Company, The Springfield Gas Company, The Middletown Gas and Electric Company, The Union Gas and Electric Company at
1462 Cincinnati, the City of Hamilton, the Village of Tarlton, and I think one or two other smaller communities, to which we sell gas wholesale. The major, or the greater proportion of that gas is really domestic gas, although not classified so by us.

I merely call attention to that so that the statement will be understood.

The Northwestern statement is purely Northwestern gas. Those figures are as follows:

1463 The Ohio Fuel Supply Company.

Gas Sales.

	Domestic.		Public bldgs.	
	Cons.	M cu. ft.	Cons.	M cu. ft.
1910	53,908	5,929,074	259	582,165
1911	55,563	6,195,805	316	750,379
1912	59,023	6,754,603	340	1,019,261
1913	61,452	5,915,499	399	794,368
1914	43,693	5,349,320	205	557,972
1915	44,880	4,872,235	184	426,020
1916	45,846	4,838,829	152	376,398
1917	50,814	5,658,839	153	322,245
1918	60,822	5,869,968	275	297,632
1919	62,182	6,020,735	351	271,870
**1920	63,060	3,881,832	415	180,356
		61,285,739		5,578,666

The Northwestern Ohio Natural Gas Company.

Gas Sales.

1910	34,579	3,193,190
1911	37,101	3,482,266
1912	39,382	3,855,030
1913	41,799	3,849,051
1914	44,444	4,023,629
1915	47,072	4,259,843
1916	50,108	4,761,600
1917	48,921	6,219,154
1918	52,365	5,947,414
1919	53,966	5,620,150
**1920	54,119	3,321,095
		48,532,422

1464 The Ohio Fuel Supply Company.

Gas Sales.

	Industrial.		Other.	
	Con.	M cu. ft.	Con.	M cu. ft.
1910	220	5,900,928	216	1,302,546
1911	194	5,485,500	211	1,096,605
1912	200	6,319,891	48	1,535,102
1913	168	7,302,154	36	1,445,150
1914	179	7,593,930	39	1,148,152
1915	151	7,113,164	32	755,443
1916	160	8,357,036	84	1,223,089
1917	173	5,638,537	56	2,164,342
1918	308	5,695,538	60	1,924,508
1919	351	5,125,871	31	1,816,347
**1920	385	1,892,073	16	1,084,700
		66,424,622		15,495,984

**Figures for 1920 are for first 5 months only.

The Northwestern Ohio Natural Gas Company.

Gas Sales.

1910.....	3	230,353	1	4,558
1911.....	4	132,030	1	2,524
1912.....	6	303,268	1	7,380
1913.....	9	407,126	1	303
1914	8	657,710	.	....
1915.....	9	632,656	.	....
1916.....	1	619,616	9	16,423
1917.....	1	42,265	6	37,103
1918.....	1	47,255	4	41,223
1919.....	1	48,001	4	32,793
**1920.....	1	16,741	4	28,117
		3,137,021		170,424

1465 The Ohio Fuel Supply Company.

Gas Sales.

	Wholesale—Municipalities—Utilities. M cu. ft.		Total. Cons.	Total. M cu. ft.
1910	137,854	3,170,032	54,603	17,021,599
1911	228,149	3,223,110	56,284	16,979,548
1912	273,537	4,365,252	59,611	20,267,646
1913	323,557	5,418,411	62,055	21,199,139
1914	397,492	10,139,319	44,116	25,186,185
1915	418,018	12,865,797	45,247	26,450,677
1916	495,132	15,251,628	46,242	30,542,112
1917	660,066	17,882,010	51,196	32,326,039
1918	853,158	17,191,057	61,465	31,831,861
1919	963,766	16,463,802	62,915	30,662,391
** 1920	496,459	8,946,470	63,876	16,481,890
	5,247,188	114,916,888		268,949,087

**Figures for 1920 are for first 5 months only.

The Northwestern Ohio Natural Gas Company.

Gas Sales

1910	.....	34,583	3,428,101
1911	.....	37,106	3,616,820
1912	.....	39,389	4,165,678
1913	.....	41,809	4,256,480
1914	.....	44,452	4,681,339
1915	.....	47,081	4,892,499
1916	.....	50,118	5,397,639
1917	.....	48,928	6,298,522
1918	.....	52,370	6,035,892
1919	.....	53,971	5,700,944
* 1920	.....	54,124	3,365,953
			51,839,867

Total number of consumers May 31, 1920 118,000

Q. Can you give us the cost of the main lines of The Ohio
1466 Fuel Supply Company, for the purpose of transporting and distributing West Virginia gas in Ohio? And if you can, Mr. Denning, as a part of your answer to that question, give us the size of the lines and the miles and the gas, and the points from and to which they extend?

Mr. Blue: The State of West Virginia objects to the foregoing question for the reason, among others, that the question calls for an answer upon an assumption that the lines were built for the purpose of transporting West Virginia gas when no such assumption is supported by the evidence.

The Commissioner: Note the objection and answer the question.

A. Line E from the Ohio River to Wheeler station at Sugar Grove, used exclusively for the transportation of gas out of West Virginia, 63.9 miles in length, 18 inch in size, cost $879,802.96. Line D, from Wheeler station to Valley Crossing, just to connect in to the Columbus feed system at Valley Crossing, 12 inch, 33.26 miles long, cost $280,043.91.

Line F, from the junction point on line E near Chester,
1467 to Pomeroy and extending beyond Pomeroy to Gallipolis and into Jackson county, consisting of part 6 and part 4 inch line, 61.19 miles long, used for the transportation of West Virginia gas exclusively, cost $226,450.11.

Line A, from Columbus to Norwood, known as the Cincinnati 18 inch, which was not built exclusively for the transportation of West Virginia gas, but which we estimate as devoted fifty per cent. of its

(* Figures for 1920 are for first 5 months only.)

cost to the transportation of West Virginia gas, being 18 inch in size, 54.30 (?) miles long, cost $762,177.56. Line J, extending from Sugar Grove, Wheeler station, across to the intersection of the Cincinnati 18 inch line——

Mr. Blue: At South Charleston?

A. At Selma, which is near South Charleston, just west of it, consisting of part 12 and part 10-inch line, being 63.97 miles long, cost $278,731.43. Line Y, extending from Sugar Grove south-easterly to Union Furnace, and paralleling the West Virginia 18-inch line, which is not devoted exclusively to West Virginia gas, being 19.88 miles long and 20 inches in Diameter, cost $554,204.06. Line Z consisting of part 10 and part 8 inch, extending from Wheeler station at Sugar Grove, in a general north-westerly direction to Sidney, Ohio, 126.62 miles long, cost $524,116.79. That line is not devoted exclusively to gas transported from West Virginia. That is
1468 all the investment made by The Ohio Fuel Supply Company for West Virginia gas.

The Northwestern Ohio——

Q. That would be all the investment by The Ohio Fuel Supply Company for the purpose of transporting West Virginia gas as relating to the main line system, would it not?

A. Yes, for main line transmission system, yes.

Q. But that would have no reference to any additions, betterments or extensions to various distributing systems occasioned by the marketing of that West Virginia gas?

A. No reference at all to distributing systems.

Mr. Weil: Or to the compressing stations.

A. Or to the compressing stations; no, sir, that would all be in addition to these figures.

Q. Yes, sir.

A. The Northwestern investment for West Virginia gas, represents their entire investment, or $6,112,730.48.

I probably should qualify that statement to this extent, that the Northwestern has some slight production in I believe Northern Ohio, but it is so small and so limited that we do not really consider it any factor at all; so for all general intents and purposes it is correct to say that the entire investment of the Northwestern is devoted to West Virginia gas.

Q. And originally those main transportation lines from
1469 the Sugar Grove station through the state of Ohio to the north-west, were laid for the purpose, solely, of transporting West Virginia gas to the Toledo country?

A. The 18-inch line of The Ohio Fuel Supply Company, extending from Wheeler Station south-easterly to the Ohio River and connecting with the 18-inch line of the United Fuel Gas Company, was laid, built, and the investment made for the express and only purpose of procuring and transporting gas from West Virginia. The

lines of the Northwestern—its transmission system—were built and laid exclusively and for the sole and only purpose of obtaining gas from West Virginia.

Q. Then, Mr. Denning, the lines which you have just described, giving the cost thereof and location, with the exceptions you have noted, both as to The Ohio Fuel Supply Company and the Northwestern Ohio Natural Gas Company, were designed, constructed and are being maintained for the purpose of handling and marketing West Virginia gas?

A. Yes.

Q. Mr. Denning, could you give us an estimate of what
1470 it would cost under present conditions to acquire and construct the system of transportation lines which you have just described, and the original cost of which you have given us?

A. It would only be an estimate, but based upon figures which I have had compiled, personally made myself, recently, the average cost of pipe line in general construction has increased about 110 per cent over the prices prevailing in 1914. The Ohio Fuel Supply 18 inch line from Wheeler to the Ohio River was built in 1909, under particularly advantageous prices and conditions. The Northwestern line was I believe built prior to that time; I can't give from memory the exact date. I think it would be fair and well within conservatism to say that the cost today would be more than double the figures which have been given.

Q. Mr. Denning, can you give us the names of the cities, towns and municipalities in Ohio supplied in whole or in part with gas acquired in West Virginia, by your company?

A. That would be extremely difficult to answer with any particularity of detail, Mr. Eagleson. I might say in general terms that Columbus and the towns between Columbus and Sugar Grove
1471 on that line in there, are practically almost wholly dependent upon West Virginia.

Q. Can you give us approximately the number of municipalities in Ohio served by The Ohio Fuel Supply Company?

A. Served direct through its own distributing systems, approximately 150 towns. When I say that I include smaller municipalities, from unincorporated hamlets up to the larger cities. Served through other distributing companies whom we supply wholesale, are Columbus, which is served through The Columbus Gas and Fuel Company and the Federal Gas and Fuel Company; the city of Springfield, which is served through The Springfield Gas Company; the City of Washington Court House, which is served through The Washington Gas and Electric Company; the city of Middletown, which is served through the Middletown Gas and Electric Company; the city of Hamilton, which is served by a municipally-owned plant—owned by the city—the village of Tarlton, and I think one or two other small communities who own municipal plants; and the Union of the city of Cincinnati. We do not *not* supply all the city of Cincinnati.

Q. Can you give us a list of the municipalities that you supply gas to, that is that The Ohio Fuel Supply Company supplies gas to, regardless of its sources?

A. You mean from all sources?

Q. Yes.

1472 Q. Please do so.

A. That list is a tabulated statement of the towns which we supply direct by the Ohio Fuel Supply Company and the Northwestern Ohio Natural Gas Company, but does not include the names of the municipalities which are not supplied direct by us.

By The Ohio Fuel Supply Company:

St. Clairsville.	New Lexington.
E. Richland.	Junction City.
Belmont.	Rushville.
Bethesda.	W. Rushville.
Morristown.	Bremen.
Barnesville.	Shawnee.
Somerton.	New Straitsville.
Miltonsburg.	Corning.
Quaker City.	Hemlock.
Spencer.	Ludington.
Cambridge.	Drakes.
Byesville.	Buckingham.
Pleasant City.	Millerstown.
Derwent.	Rendville.
Buffalo.	Glouster.
Senecaville.	Trimble.
Caldwell.	Jacksonville.
Sarahsville.	Logan.
Claysville.	Haydenville.
Rix Mills.	Enterprise.
1473 Belle Valley.	Nelsonville.
Coal Ridge.	Carbon Hill.
Mt. Vernon.	Midway.
Fredricktown.	McArthur.
Academia.	Hamden.
Gambier.	Wellston.
Howard.	Coalton.
Millwood.	Glenroy.
Bangs.	Jackson.
Brandon.	Allensville.
Martinsburg.	Gallipolis.
Croton.	Middleport.
Appleton.	Pomeroy.
Johnstown.	Chester.
Alexandria.	Gahanna.
Lock.	New Albany.
Perrysville.	Canal Winchester.
Hayesville.	Waterloo.
Mifflin.	Crooksville.
Zanesville.	Roseville.
South Zanesville.	Beem City.

Hanover.
East Fultonham.
Dresden.
Hooker.
London.
Xenia.
1474 Wilberforce.
Miamisburg.
Germantown.
Monroe.
Sharonville.
South Charleston.
Rockbridge (Field.)
Tremont City.
Lawrenceville.
Buckeye Lake.
Colfax.
Pleasantville.
South Pleasantville.
Pickerington.
Lancaster.
White Cottage.
Old Washington.
Crafton.
Sedalia.
Piqua.
Sidney.
Fultonham.
Frazeysburg.
Carroll.
Sugar Grove.
West Jefferson.
Cedarville.
Somerset.
Franklin.
West Carrollton.
Bethany.
Urbana.
Mt. Sterling.
Murray City.
North Hampton.
Groveport.
Camp Grounds.
Horns Mills.
Baltimore.
Thurston.
Basil.
Nashport.
Trinway.
Lore City.
New Carlisle.
Beattytown.
Troy.
Tippacanoe City.

Covington.

By The Northwestern Ohio Natural Gas Company:

Toledo.
Bowling Green.
North Baltimore.
Maumee.

Perrysburg.

By Point Pleasant Natural Gas Company:

Point Pleasant, West Virginia.

1475 Q. Can you give us also the list of towns supplied by the Northwestern Natural Gas Company?

A. That is included in the list, Toledo, Bowling Green, North Baltimore, Maumee, Perrysburg, and by the Point Pleasant Natural Gas Company, Point Pleasant, West Virginia.

Q. Mr. Denning, can you give us the amount of gas sold by The Ohio Fuel Supply Company at wholesale for the year 1919, to utilities and municipalities in Ohio, and also the amount of gas for like utilities sold to the municipalities, of Tarlton, Williamsport, and Hamilton, with totals, and then the summary of the gas sold by your company in the year 1919, with the total, together with the number of municipalities, churches, schools, state institutions and public

buildings furnished gas by your company during the year 1919, in thousands of cubic feet?

A. Yes, sir.

Q. Please do so.

A. It is as follows:

1476 The Ohio Fuel Supply Company.

Wholesale Gas.

Year 1919.

Gas Sold to Utilities and Municipalities.

Utilities.	M cu. ft.	
Clintonian Fuel & Oil Co.	2,798	
Granville Fuel & Light Co.	104,599	
Washington Gas & Electric Co.	171,020	
East Ohio Gas Co.	19,781	
Buckeye State Gas & Fuel Co.	195,351	
Springfield Gas Co.	1,840,124	
Middleton Gas & El. Light Co.	486,793	
Union Gas & Electric Co.	3,459,522	
Columbus Gas & Fuel Co.	6,851,820	
Federal Gas & Fuel Co.	2,964,484	
Pt. Pleasant Natural Gas Co.	94,200	
Northwestern Ohio Natural Gas Co.	273,310	
Total		16,463,802

Municipalities.

Village of Tarlton	8,161	
Village of Williamsport	19,278	
City of Hamilton	936,327	
Total		963,766
		17,427,568

1477 The Ohio Fuel Supply Company.

Wholesale Gas.

Year 1919.

Summary—Year 1919.

Retail Sales	18,935,767	
Wholesale Sales	17,427,568	
Total		36,363,335

Number of Municipalities, Churches, Schools, State Institutions and Public Buildings Furnished Gas During the Year 1919 by The Ohio Fuel Supply Company.

Municipalities	135
Churches	130
Schools	57
State Institutions	43
Public Buildings	170

1478 Q. Mr. Denning, to what extent is your company endeavoring to find and procure additional gas supply first within the state of Ohio, going into, if you will, please, the territory, the efforts that you are making to find additional gas territory, your leasing department and your extent of your drilling, and a full general description of the efforts of your company to maintain if possible your natural gas supply for your consumers.

A. We are constantly on the search for new gas territory; we maintain a considerable force of men whose business it is to try to find all the leases for anything that looks like likely-looking territory.

The best indication I can give you as to our attitude in that respect is to be drawn I think from the statement heretofore given as to the operated and unoperated acreage in 1910 as compared with 1919. In 1910 the operated acreage was 39,549 acres; in 1919 the operated acreage had almost—increased from that figure to 119,045, or 80,000 acres more. The unoperated acreage in 1910 was 414,117 acres, which had increased in 1919, to 865,131 acres, or over 100 per cent. One branch of our business or organization devotes its entire time to the attempt to discover—I won't say discover, because they don't always get it—the attempt to discover and develop and pro-
1479 duce gas—in fact I think I may say that the greatest amount of our epense is in the attempt to discover and produce gas.

Q. What do you say as to whether or not the recognized natural gas sands or deposits in Ohio, as described and defined by geologists and proven by actual test by those in search of gas, have been in the main in Ohio, either exhausted or in process of depletion?

A. Unquestionably the present known fields are in process of exhaustion, as compared with 1914. The number of non-productive wells or "dry holes" is greater in proportion to the total number of wells drilled today than it was in 1914. The average production per acre brought in by The Ohio Fuel Supply Company for the first five months of 1920, compared with 1914, showed a falling off of 34 per cent. in production; that is, wells produced in 1920, showed an average production of 34 per cent. less than wells in the same field in 1914.

Mr. Weil: That is new wells.

A. New wells, yes, sir.

Q. Is that due to the fact that you are out of the heretofore and well-known deposit, in the less reliable or speculative acreage,
1480 or what is your explanation of that fall-off?

A. Well, that could be explained that way, as one factor. In my judgment, however, the main factor is that the gas is being gradually exhausted from the gas-bearing sands.

Q. What is the number of drilling rigs or equipments or the extent of your active physical operation at the present time in drilling wells?

A. I would have to speak from memory only on that, Mr. Eagleson, not having the figures before me; but I would say that we were operating directly under our own control probably 60 drilling rigs, and besides a considerable number contracted for with outside contractors and not under our own direct control. We have drilled to date this year, I think, about 140 wells. I would like to make that statement, however, subject to correction and get those figures tomorrow. In Ohio I am referring to now.

Q. And does that degree of intensity that you are now drilling fairly measure the efforts in the past months and year or years?

A. It is not so great as we have drilled in previous years due to inability to obtain men and materials. Since the War Period and during the War Period, we had to come in competition with many factors, and since that time—speaking now, since the Armistice was signed—generally we have experienced a very great deal of trouble in obtaining men and materials. At the present moment the
1481 transportation system of the country is in such condition that we can't rely for a minute on the railroads bringing us pipe and material. In a number of instances we have had to truck to get material into the field. So, while we are bending every effort to accomplish something in the way of additional production, we are handicapped by the matters that I have just spoken of.

Q. Are you making an effort or investigation in states outside of Ohio to find natural gas, within a radius of possible transportation to Ohio?

A. The Ohio Fuel Supply Company is not, no, sir. We know from experience in the past that it is idle to look for it in any contiguous territory in Indiana or Pennsylvania. The only known fields that we have to do with for a possible widening of production area is West Virginia. The Ohio Fuel Supply Company has no direct interest in production in West Virginia. It is wholly dependent upon the supply which the United Fuel Gas Company may give to it for The Ohio Fuel Supply Company and the Reserve Company, the producing company, in West Virginia, through the connecting line, the pipe line, may deliver to the Northwestern for Toledo and its other towns.

1482 Q. Then exclusive of the gas to be obtained in Ohio along the lines you have suggested, the future gas supply to be distributed by your company would necessarily come, if at all, from West Virginia?

A. So far as any source of supply is available today, I would say it must be, yes.

Q. I believe I neglected to ask you in connection with the number of towns you supplied in Ohio, the number of gas consumers your company has in the state?

A. The number of gas consumers which we supply direct, I have already placed in the record in the statement made.

Q. Yes, and could you give in connection with that an estimate at least, of the number of people in Ohio that are thereby dependent upon natural gas for heat, light and fuel?

A. The number of consumers which The Ohio Fuel Supply Company supply direct?

Q. No, I am asking the number of people, I mean that as the population, as distinguished from the number of meters or consumers?

A. Well, in answering that question I want to call attention to the fact that a very large proportion—I think roughly speaking about 55 per cent of the gas sold by The Ohio Fuel Supply Company—is delivered to municipalities and other utilities, to which it does
1483 not supply the consumer direct, referring again to Columbus, Springfield, Hamilton, Middletown and these other towns. On the basis—and we figure approximately about 4½ persons for each meter connection—I haven't the population figures at hand, but I would say, including the volume of gas which The Ohio Fuel Supply Company delivers to other municipalities and utilities, and adding thereto the total number of consumers which it supplies direct, The Ohio Fuel Supply Company, I would estimate is responsible for the natural gas supply of approximately one million people.

Q. Now, with reference to these one million people dependent upon your company for natural gas, as you stated, if the authorities in West Virginia, pursuant to the act in question here, were to divert to persons, firms or corporations in West Virginia, for the services of the public, or any part of the public, for all purposes in the State of West Virginia, a substantial amount of the gas that otherwise would come through the United Fuel Company lines to the lines of your company for distribution to those consumers, what effect would that have upon their gas supply in Ohio, and the operation of your company in their service?

Mr. Blue: The State of West Virginia objects to the foregoing question as incompetent, irrelevant and immaterial, and for
1484 the further reason that the question assumes a construction of the statute not warranted by the terms of it and calls for the answer upon such an assumption; and for the further reason that the witness is not competent to construe, or is not called upon to construe the statute in the terms of the statute; and that the answer given by the witness would be the statement of a conclusion upon a legal question, and a question that is to be determined by the court and not by the witness.

The Commissioner: Note the objection and let the witness answer.

A. I understand your question to be what effect the diversion of a substantial amount of the gas received from West Virginia would

have upon the operations and property of The Ohio Fuel Supply Company and the people whom it serves. Is that a correct conclusion?

Q. That is correct.

A. A very disastrous and destructive effect upon both, of course more or less dependent upon the quantity of gas diverted. A substantial quantity diverted would have the immediate effect of disorganizing and disarranging the service to the consumers throughout the state, make necessary the entire elimination of service

1485 from a considerable number of consumers, a complete rearrangement of lines, compressing stations and operating conditions of the company and undoubtedly deprive a considerable portion of the people served by the company, of gas service, thereby destroying the investment which they have in appliances, and also result in a destruction of a considerable portion of the company's property, by reason of the fact that it would no longer be of any value or use in the company's operations, and would not have any value whatsoever, except what might be possibly obtained from a resale or junk or a salvage value. It would necessitate—I think I have already said—a complete elimination or discontinuance of service to a considerable number of consumers.

Q. Do you mean by that a considerable number of municipalities?

A. Yes; for instance, for illustration, take the city of Columbus——

Q. That is the capital of the state?

A. The capital of the state, yes; we rely almost entirely upon the volume of gas produced in West Virginia and transported through the West Virginia 18-inch line, to supply Columbus. If that were diverted or were to cease, Columbus would be, I may say, almost without gas service entirely.

1486 Q. Well, let me put this question right in that connection: In the peak load period of the Winter season, if the West Virginia gas were to be denied in whole or in substantial part, to The Ohio Fuel Supply Company through the connection you have described, would it or would it not in effect deny the city of Columbus any supply of natural gas at all?

Mr. Blue: The State of West Virginia objects to the foregoing question for the reasons heretofore assigned.

The Commissioner: Note the objection.

A. Last winter during the cold period, The Ohio Fuel Supply Company did not have enough gas from all sources produced or purchased in Ohio, and including the gas delivered to us from West Virginia, to supply cold-weather-demands of its consumers. To divert or discontinue or take away the supply of gas from West Virginia would leave Columbus absolutely without gas; that is, when I say "absolutely," I mean without any dependable gas service at all, and to all practical effects absolutely without gas. As applied to the Northwestern——

Q. Just a minute before you go to that, if I may. What
1487 would be the effect upon Springfield under the same statement?

Mr. Blue: Same objection.

A. The same result.
Q. The same result as to Springfield?
A. Yes.
Q. And to what extent would the result be the same as to Cincinnati, Ohio?

Mr. Blue: Same objection.
The Commissioner: Note the objection.

A. Well, with regard Cincinnati—I can put it this way: The Ohio Fuel Supply Company has prior obligations to its own consumers which it supplies direct. The obligations to supply Columbus, Springfield, Hamilton, are secondary. Well, I will include in that also Cincinnati and Middletown—are secondary to its obligations to supply its own consumers. However, it happens that Cincinnati and Middletown have prior rights over Columbus and Springfield and Hamilton, so that in the event of shortage we would take care of to the best of our ability, our own consumers first and what gas we would have left would be divided to Cincinnati and Middletown.

By the time we got around to the other towns I don't believe
1488 there would be any left.

Q. Now, Mr. Denning, you may take up the thread of your answer where I interrupted you, with the Northwestern, I believe you——

A. The Northwestern Natural Gas Company, as I have said before is wholly dependent and has been for years, upon the supply of gas produced in West Virginia, and delivered to it by us. Were that flow to be interfered with or to be stopped it would mean total destruction of natural gas service in those communities which it serves.

Q. That would rather wipe out the availability for any practical use or value, the transportation lines of the Northwestern Company as you have described, together with the distributing plants, so far as natural gas would be concerned, would it or not?

A. The distributing plants would have a measure of value on the assumption that manufactured gas could be established, or a manufactured gas plant could be built, which would be a question to be determined in the light of the facts to be existing at that time—the advisability of constructing a manufactured gas plant. The transmission system and compression system would have no value except their junk value. You understand, Mr. Eagleson, that the
1489 real value of natural gas service is continuity; your consumer must have the gas coming to him in an even flow at all times for his demands, whenever he wants it. When anything interferes with that continuity of service, which is always under his control, or under his demand, I should say, the result is disrupted and unsatisfactory service. It is not satisfactory to the consumer to have a

continuous gas service on Monday and Tuesday of the week, to be interrupted on Wednesday, Thursday and Friday and have it resumed again on Saturday and Sunday. The value of it to the consumer lies in the continuity as I have said before, so when that is interrupted, you destroy your service. The interruption need not be total; it may be only partial, and yet have the same effect.

An adjournment was here taken until Wednesday, July 21, 1920, at 10:00 o'clock A. M.

ORIGINAL, #20 & #21.

October Term, 1920.

1490 THE COMMONWEALTH OF PENNSYLVANIA

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO

vs.

THE STATE OF WEST VIRGINIA.

Proceedings of Wednesday, July 21st, 1920.

And now, Wednesday, July 21, 1920, the hour of 10:00 A. M. having arrived, parties met pursuant to adjournment.

L. B. DENNING resumes the stand.

Direct examination (continued).

Mr. Eagleson:

The Witness: Yesterday I stated, subject to correction, that in my judgment the number of wells drilled by The Ohio Fuel Supply Company this year was approximately 150. I find my statement to be incorrect and the correct figure is 91; that is for the five months' period ending June 30, 1920. You asked yesterday, I believe, Senator Blue, for the length of certain lines. I have now the exact length and size. Line J, from Sugar Grove, Ohio, to Salem, Ohio, is ten-inch pipe 40.8 miles and 12-inch pipe 24.5 miles, a total of 65.3 miles. Line Z, from Sugar Grove, Ohio, to Sidney, Ohio, is ten-inch 103.1 miles and eight-inch pipe 25.9 miles, or a total of 129 miles. The figure given yesterday on the line from Columbus to Norwood, I believe, was 54 miles. That is a mistake. The correct figure is 106.1 miles of 18-inch pipe. Line H, Sugar Grove to Zanesville, is also a part of that system consisting of eight-inch pipe,
1491 31.2 miles and ten-inch pipe 4.6 miles, or a total of 35.8 miles. Line S, from Sugar Grove, Ohio, to Gahanna, Ohio, is 16-inch pipe 32.8 miles, 12-inch pipe .4 miles, or a total of 33.2 miles. In addition to that there are approximately 15 miles of large

size belt lines around the City of Columbus which cost approximately $70,500.00. The figures in relation to the cost of these lines that I have given are not changed.

Q. Mr. Denning, when we closed last evening you were telling us of the conditions that would obtain in Ohio as to the inability of your company to supply its consumers with enough gas to meet domestic purposes and so forth, together with its effect upon the company property in case the bill in question here were valid and enforced; I wish you would go a little further if you can and advise us what the result of such an occurrence would be upon the domestic consumer, or any consumer himself, as to the position it would leave him in in regard to fuel and fixtures, and how he would meet such a situation, if you know, including the cost and inconvenience that may follow to the consumer.

Mr. Blue: The State of West Virginia objects to the foregoing question, for the reasons assigned on yesterday to a question of like nature.

The Commissioner: Note the objection and let the witness answer.

A. Natural gas is the best and most economic and most
1492 convenient fuel for all general purposes that has ever been discovered. Its B. T. U. content of heat efficiency is generally from 100 to 150 per cent more than that of any manufactured gas or any solid fuel. For those reasons, and due to the practically unlimited supply in the past, the domestic consumer throughout Ohio, to the number of somewhere between four million and five million, have grown to practically depend upon the use of natural gas for all purposes of a general household nature, cooking, in a large measure for lighting and in a very large measure for heating, particularly in dwellings. As I said yesterday, one of the great values of natural gas service, and its prime requisite, is continuity of service; the ability of the consumer to step into his house any hour of the day for the 365 days of the year and by simply turning a little stopcock and lighting the gas, having instantaneous service at his command. The problem of the gas company has always been to supply that instantaneous demand and maintain that continuity of service. We have reached a point where, as I said yesterday, during extreme cold weather we are unable to meet the entire demand of the consumer. To have any considerable or substantial quantity of gas diverted or eliminated from our West Virginia supply means to so disarrange and disorganize, and I may say discontinue the service to the consumer as to render it practically worth-
1493 less to the domestic consumer. The effect of that upon the consumer direct is that he must turn to some other form of fuel, either gaseous or solid, to supply that need. If he turns to a gaseous fuel the only remedy he has, and the only thing he can have is a manufactured gas. He will not get the service from the manufactured gas that he gets from natural gas for the reason that the B. T. U. content of the artificial gas is rarely more than one-half of the B. T. U. content of natural gas. If he turns to a solid fuel

he then has the complete elimination of his present fixtures and appliances, the readjustment of household conditions, and with the further added inconvenience of the dirt and annoyance and the necessity of cleaning out ashes and removing ashes and that sort of thing. If he turns to the manufactured gas he can, to a limited extent, use the fixtures and appliances for cooking that he has now with some modification and adjustment at some expense. He cannot, however, except in a very limited way, use the heating appliances that he has, so he must necessarily not only sustain what I may call a loss in the way of better conditions in the household but also a substantial financial loss in the way of being compelled to junk and abandon appliances and fixtures which are already in the house and already in use and which have been in use for a good many
1494 years. The actual money outlay or loss sustained by the individual consumer would be purely a matter of conjecture, depending upon the individual conditions. I would estimate, due to the change in fixtures, a loss of from $50.00 to $75.00 per consumer as a minimum; due to the change in house conditions I fancy would be much more than that, although I am not prepared to give any figure as to that.

Q. Now you put the minimum at from $50.00 to $75.00, Mr. Denning, per consumer; what would you say the average would be?

A. Well, I am not sure that I quite understand your question, Mr. Eagleson; do you mean the total loss for the total number of consumers or the average loss per consumer?

Q. The average loss as distinguished from the minimum, if there is a distinction.

A. Well, it would be somewhere between—oh, I see; I get what you mean; well, that of course, is purely an estimate and an approximation on my part; I would say an average loss of $100.00 to $150.00.

Q. In the event the conditions would obtain, such as you have been discussing, and in addition to your answer of yesterday that it would render entirely useless many of your main lines, and for the most part many others of the size that they were constructed, what would be the result with reference to the distributing systems in municipalities to which you would be unable to supply
1495 gas?

Mr. Blue: We note a similar objection on the behalf of the State of West Virginia.

The Commissioner: Note the objection and let the witness answer.

A. With very few exceptions they would be reduced simply to their junk or salvage value, for the reason that they were constructed primarily for the distribution of natural gas without regard, or without thought of ever utilizing them in manufactured gas distributions. You understand that the principles of construction as between a natural gas plant and a manufactured gas plant are entirely different and we would have very little left out of the distributing systems which we own ourselves other than junk or reclaimed value.

I believe that some portions of the city of Toledo might be utilized in manufactured gas distribution, but even that is problematical.

Q. Well in the event that a portion of the system of Toledo might be found possible for artificial service, would it require, before the service of artificial gas, rather a reconstruction or readjustment or redrainage devices to be installed?

Mr. Blue: We note the same objection on behalf of the State of West Virginia.

The Commissioner: Note the objection and let the witness answer.

1496 A. It would require a complete survey and inspection of the entire system, with the elimination and reconstruction of such parts of the system as are not suitable for natural gas distribution. In addition to that it would require the construction of the benches, retorts and all the machinery necessary for the production or manufacture of manufactured gas itself which, in the City of Toledo, would run into quite a large sum of money, in my judgment in excess of $3,000,000.00.

Q. You spoke of the pipes and other facilities in a distributing system in case of discontinuance, for any cause, of natural gas, as having a salvage or junk value; would there be any instances, and if so, to what extent, where on account of underlaying municipalities where streets are paved and municipal improvements that were super to or involved the pipe lines, would there be instances where it would not be profitable or even feasible to lift the system at all?

A. Very much so; for instance in the town of Zanesville, in my judgment only a very small percentage of the distributing system would it pay to reclaim or to remove the pipe for the reasons I mentioned. I think the same would be largely true of Columbus.

Q. And in that event what would be the result on the capital investment of the gas company?

A. The cheapest and most expeditious way to get rid of it would be to let the pipe lay in the ground and charge it off. It would be a total loss.

1497 Q. Mr. Denning, in the service of consumers in Ohio, I wish you would give us briefly the classification, if such there be, of Ohio consumers and the practice as to their service, and under what authority such practice is maintained.

A. Speaking for the Ohio Fuel Supply Company alone, and without regard to the practice of other companies at the present time it is my belief that we make no distinction at present in the classification of consumers. That has not been true as to the past. Up to, I should say, about a year ago we classified consumers and during the war, in obedience to the orders of the Fuel Commissioner of the United States Government, there was a rather intricate and complicated classification in existence, but with the cessation of the war that classification was very largely abandoned, at least by our company, so that at the present time we do not make any particular distinction. I say that because I have not recently examined all our rate schedules, so there may be one or two places wherein the old classification is still in effect, but I do not think there are.

Q. Well, generally speaking, what two divisions or classes are consumers of natural gas regarded as being in?

A. Originally the general classification was into domestic and industrial. Later on some of the companies adopted a modification of that form or classification and created a commercial class with orders of priority inside each particular class. Some com-

1498 panies, I understand, still have that classification in effect.

Q. With reference to your company, if you know, Mr. Denning, in filing schedules with the Public Utilities Commission of the State of Ohio what is the classification therein set forth?

A. At the present time——

Q. That is the general or controlling classes?

A. Domestic and—if that is what you mean?

Q. Yes; and what is the other one?

A. Industrial.

Q. And how do they stand with reference to priority or right in case of failing or declining gas below an amount sufficient to meet the reasonable demands of all of both classes of those consumers?

A. We provide in the schedule and in the contracts with the industrial consumers, that in the event the supply of gas is insufficient at any time to meet the requirements of both the domestic consumers and the industrial consumers, the industrial consumers may summarily and without notice, be discontinued in favor of the domestic consumer.

Q. Is that a rule or relation between the gas company and the consumers with the approval of the Public Utilities Commission of Ohio, or by order of the Public Utilities Commission of Ohio or both?

1499 A. Well, I believe it is rather a combination of both, a rule established by the companies originally, and sustained and approved by the Public Utilities Commission and later on, when the shortage conditions became acute, summarily enforced by the Public Utilities Commission. I think that is really a true expression of the situation.

Q. Can you give us the action and practice of our Commission in Ohio relating to natural gas companies with reference to what are commonly called and legally designated by the Commission as its administrative orders as to the method of serving gas and the priority of rights between and among the different classes of consumers of the gas companies?

A. May I ask to have that question read please?

(Question read.)

A. The Commission have issued administrative orders requiring the discontinuance of gas service to industrial consumers in favor of domestic consumers at such times as the supply was insufficient to meet the requirements of both classes of consumers. They have been very active in that respect, in times of shortage sending their inspectors to various cities in the state to see that those orders are enforced.

Q. Do you know as a matter of fact, Mr. Denning, personally

whether or not the Public Utilities Commission of Ohio does
1500 not, under what it may call its emergency power under its emergency section, 614–32 order, even in the classification known as domestic, when gas is shut off from all other classes in the peak load or winter periods, that the Commission may not and does not, as a matter of practice, go into the first preferred class, the domestics, and by special orders, generally an application, provide that even the domestic consumer may not use beyond a certain number of thousand cubic feet of gas per month?

A. That action has been taken in the past, particularly in Cincinnati, where large domestic consumers—or I will put it this way—where domestic users of large quantities of gas were limited to a certain amount per month. For instance I believe in Cincinnati they established the rule of 100,000 cubic feet per month during the winter conditions of two years ago. You understand, Mr. Eagleson, that I am speaking now only from what I have learned from other companies, because we have not had that rule or those situations to meet ourselves, on account of our conditions being better than our cotemporaries in the business.

Mr. Eagleson: In connection with Mr. Denning's testimony at this point I desire to offer in evidence on behalf of the complainants certified copies of administrative orders of the Public Utilities Commission of Ohio relative to the discontinuing of gas to in-
1501 dustrial consumers during the winter period or during any period of natural gas shortage, to the end that the domestic consumers in Ohio may have sufficient gas to meet necessary domestic purposes. If counsel for the State of West Virginia will agree that these are bona fide certified copies without my having to call the Secretary of the Public Utilities Commission of Ohio to the stand to so testify I will offer them at this time with Mr. Denning on the stand.

Mr. Blue: There is no objection to them being introduced that way.

Mr. Eagleson: I will, therefore, offer in evidence Ohio Exhibits Numbers 3, 4, 5, 6, 7, 8, and 9.

The Commissioner: Do the gentlemen on the other side want those copied and furnished to them?

Mr. Blue: I think the substance of them has been stated.

Q. Mr. Denning, can you give us the capital stock of The Ohio Fuel Supply Company and its ownership?

A. The capital stock of The Ohio Fuel Supply Company is at present——

Q. Well, you may kill the last part of that question; just give me the amount of the capital stock of The Ohio Fuel Supply Company.

A. $19,873,000.00, and its ownership is vested in some four thousand stockholders—pardon me a minute—I said $19,873,-000.00; I should have said $19,813,000.00.

1502 Q. Has your company any affiliation, in any direct way or otherwise, with the Standard Oil Company, Mr. Denning, or any of its interests?

A. Well, there are quite a number of Standard Oil Companies. I do not know just exactly what you have in mind. I will say this, however, the only ownership that we know of of any stock arises from the purchase by The Ohio Fuel Supply Company of The Northwestern Ohio Natural Gas Company some years ago, at which time, stock of the Ohio Fuel Supply Company was exchanged for stock of The Northwestern Ohio Natural Gas Company. In that transaction the Rockefeller Institute and John D. Rockefeller, and some of his associates acquired some Ohio Fuel Supply Company stock. I have not examined the stock record recently to see whether or not they have disposed of any of that stock, but at that time the stock ownership was relatively very small. So far as operation and management or dictation or control of company policy is concerned, the group of men commonly designated as "Standard Oil," nor any of the Standard Oil Companies have anything whatsoever to say as to the management and control or dictation of policy of The Ohio Fuel Supply Company.

Q. Can you give us the original capital investment, or at least approximately in amount, of the Ohio Fuel Supply Company?

A. At its organization in 1902 it had a capitalization of
1503 $2,500,000.00.

Q. And has there been additions and betterments and increased capital investment from time to time up to the present time?

A. There has.

Q. Can you give me about what the present value of your plant would be?

A. The investment today, as carried on our books representing cost only, with liberal charges to those items of expense before crediting to capital account, our total investment as of May, 1920, for physical properties, was $24,588,676.99; material in stock amounted to $1,159,727.92; accounts receivable amounted to $1,544,-302.91.

Q. What would the items you have given us total?

A. Well, I have not totaled those items; it would be necessary to calculate them.

Q. Well, they would approximate $26,000,000.00, would they not?

A. Approximately $28,284,696.00.

Mr. Blue: How much?

Witness: $28,284,696.00.

Q. Mr. Denning, can you give us briefly the location, cost of construction, capacity by horsepower, and service of your various pump stations or compressing stations?

A. I can give you the locations because they are identified
1504 on the map.

Q. Well, we have really the locations.

A. Yes; you have the locations. The cost of construction and capacity in horsepower I cannot give you without reference to our records.

Q. How convenient would it be to get that; that is could you get it today or by tomorrow morning?

A. I doubt it. I might. I rather think I would have to send to Pittsburgh to get those figures. I don't think they are kept here. If desired, however, I can prepare and submit a statement of that.

Q. Well, I wish you would do that if it can be done with reasonable convenience.

A. Give me a memorandum as to just what you want on that Mr. Eagleson and I will see that it is obtained for you. I do not have those figures here with me.

Q. Mr. Denning, do you regard it as practical or possible to construct and operate what I will term as containers in which to store natural gas in the warm periods or the opposite of the peak load periods in order that there might be a surplus of gas to draw upon to tide over peak load periods in serving consumers in communities of considerable population like Columbus for instance?

A. Assuming the demand that we have now for natural gas I would answer your question by saying it is neither practical nor practically possible. Of course, you understand that within the limits of engineering and sound construction I can conceive
1505 of a situation where if you wanted to put sufficient money in, you might build a great battery of holders, that would hold a sufficient quantity of gas temporarily, but the cost of such construction would be a hopelessly prohibitive burden upon the public and financially impracticable. Secondly—well I will let it go at that. When you consider that the capacity of the average holder for manufactured gas, I understand, is in the neighborhood of 2,000,000 feet and when you further consider that on a cold winter day the town of Columbus would demand anywhere from 50,000,000 to 75,000,000 feet a day, you can very readily see how many holders you would have to have to carry over even a 24-hour demand.

Mr. Eagleson: You may inquire.

Cross-examination.

Mr. Blue:

Q. Your Ohio Fuel Supply Company was organized in 1902; what properties did your company first acquire?

A. It was substantially a consolidation of a number of smaller companies operating in Southern Ohio, among them being The Mount Vernon Natural Gas Company, The United Gas Company, The Corning Natural Gas Company, The Roseville & Crooksville Gas Company, The Bremen & Rushville Gas Company and The Great Southern Gas and Oil Company. They were all
1506 smaller properties operating in Central and Southern Central Ohio.

Q. And in what business had the smaller companies named by you been engaged?

A. In the natural gas producing and distributing business.

Q. In a short way where was The Mt. Vernon Gas Company en-

gaged in producing and distributing gas, and how long had it been so engaged?

A. I cannot answer that—the latter part of that question. You understand, Senator, these matters occurred before I had personal contact with them myself and I can only give them to you from what record information I can obtain. I would say generally the Mt. Vernon Gas Company was operating in the Knox-Licking Field and in the vicinity of Mt. Vernon, Ohio, in Knox County.

Q. And what community or communities did it serve?

A. I do not know.

Q. Well, where did it obtain its gas for its consumers?

A. Well, presumably in the immediate vicinity, in the Knox and Licking County Field.

Q. In Ohio?

A. Yes, sir, in Ohio.

Q. Where was the United Gas Company operating?

A. That, I understand to have been further over in Guernsey County, Ohio, Cambridge and in that vicinity.

Q. It was producing its gas in Ohio?.

1507 A. Yes, sir.

Q. And had been for sometime?

A. Yes, sir. All these companies that I mentioned were producing their gas in Ohio.

Q. And the Corning Gas Company, do you know where it was engaged and what communities it served?

A. Yes, sir; the village of Corning in Southern Ohio in Perry County.

Q. And the Roseville & Crooksville Gas Company; where was it operating and what communities was it serving?

A. In the towns named, Roseville and Crooksville in Perry County, Ohio.

Q. And the Bremen Company; what is the name of that?

A. The Bremen and Rushville Gas Company.

Q. The Bremen and Rushville Gas Company; where was it engaged?

A. In the same general vicinity in Perry county; those towns are all in the same relative vicinity.

Q. And where was the Great Southern Company engaged?

A. At Zanesville.

Q. How much territory was it covering?

A. I do not know.

Q. Just in a general way will you indicate the territory served by the companies named by you by reference to the lines on Ohio Exhibit Number 2?

A. Well, that would have to be with reference to the present situation, Senator, because, very largely those lines have been

1508 taken up and the situation very materially changed. Taking the Mt. Vernon situation you will find Mt. Vernon on Exhibit number 2 north of the Treat Compressing station; the Great Southern Territory at Zanesville, over here (indicating); The Roseville, Crooksville, Rushville and the other towns mentioned are south of

Zanesville. But so far as my knowledge goes there are very few of those original transmission lines still in existence, the system having been entirely reorganized, and I may say rehabilitated.

Q. After taking over, or after acquiring the companies you have already indicated and named, you consolidated them into one service?

A. Yes, sir.

Q. And then you proceeded to extend your lines?

A. Yes, sir.

Q. Where were the first extensions and in what general way or direction or to what particular sections were your extensions made in their successive steps?

A. I think in point of time the first extension of any magnitude would be the 18-inch line from Treat Station to Columbus.

Q. Just approximate that time, will you please?

A. That would be somewhere about 1903 or 1904. About the same time, or in the year 1903 was the purchase of The Federal Gas and Fuel Company in Columbus with its fields in the
1509 Sugar Grove District and with the twelve-inch line extending from Sugar Grove up to Columbus, which line is very largely in existence today, and is one of the two lines shown there as extending from Sugar Grove to Columbus. I think next would follow, about 1907, the construction of the 18-inch line from Columbus down to Cincinnati or to Norwood rather. I may be incorrect as to the exact time, but this is speaking generally; in 1909, completed about December, 1909, was the construction of the 18-inch line from Sugar Grove to the Ohio river to connect with the line of the United Fuel Gas Company bringing gas from West Virginia. I may say in this connection that The Ohio Fuel Supply Company originally constructed the entire line into West Virginia and into the West Virginia field; afterwards sold it to the United Fuel Gas Company. Then later, I think about 1910, followed the acquirement of The Ohio Southern Gas Company which embraces that territory or those towns in Jackson and Vinton counties, and Gallipolis, Middleport and Pomeroy, and the line from Chester to Jackson shown on the map. In 1917, I think it was, we acquired, by purchase, the property of The Central Contract and Finance Company, which embraced acreage and producing wells in Vinton County, Ohio, and the pipe line extending from Sugar Grove to Sidney as shown on the map.

Those are substantially the larger developments and acquisi-
1510 tions of property.

Q. At the time you extended your lines to Columbus and from Columbus to Cincinnati you were receiving no gas from the State of West Virginia?

A. I think that is correct, Senator.

Q. And in a large measure the extension and development of your lines in the section shown on the map by Zanesville and the section east, as well as the section south in respect to the extensions of that line when extended, you were not receiving gas from the State of West Virginia?

A. There was no gas received from the State of West Virginia until the 18-inch line was completed in 1909.

Q. And between 1902 and 1909, your company had largely extended its lines and had entered upon the service of gas to very many communities in the State of Ohio?

A. Yes, sir.

Q. Between 1902 and 1909 you were getting your supply of gas from the gas fields in the State of Ohio acquired by you in the consolidation, or by subsequent purchases for your customers in the State of Ohio?

A. May I have that question read?

(Question read.)

A. My answer would be yes.

1511 Q. On yesterday you referred to a 20-inch line running parallel to your line from the West Virginia line to Wheeler's station at Sugar Grove—your Y, I believe, you called it?

A. Yes, sir.

Q. When was your line Y—your 20-inch line built?

A. I think sometime in the latter part of 1917.

Q. Your company has drilled a large number of wells in the field described by you yesterday as the Ashland field as well as in the Clinton, and to make it short, all the other gas fields in the territory?

A. I presume first and last, Senator, we have drilled in the neighborhood of 3,000 wells in Ohio fields.

Q. And as you drilled those wells, you extended your lines and you extended your service in the State of Ohio?

A. That don't necessarily follow. For instance, we have not extended service in the State of Ohio to any new towns with the exception of one small community in northern Ohio, for three or four years, the towns that I spoke of on that line running from Sugar Grove to Sidney were acquired by purchase, and the real controlling feature in that purchase was not the distributing systems, but the source of production, or potential source of supply behind the property. In other words, we bought the property on the basis of acreage and possible gas production they had rather than the market

1512 they had. Today our struggle is not to take on new towns, but to maintain and take care of the markets we have.

Q. Well, take for instance your field and your lines east of Zanesville; after acquiring the properties you have already referred to by specific name, you proceeded to develop the gas fields east of Zanesville and to extend the lines of service from those gas fields, did you not?

A. That was the early period of development, yes, sir.

Q. And you were relying then upon the gas that you found in the State of Ohio, and your development in that section was based upon your gas supply in the State of Ohio?

A. Yes, sir; that is true.

Q. Take your field north of—we will say north of the Treat Compressing Station; you developed your gas field up in that section; found the gas and extended your line for service to consumers in the State of Ohio, depending upon your gas production in your fields in Ashland and that section did you not?

A. I think a correct answer to that would be that we extended our lines into that new field to take care of present consumers rather than new prospective ones at that time.

Q. When did you extend your line up into the Ashland field?

A. I cannot give you the exact date of that off hand.

1513 Q. You may approximate it if you can do so.

A. Well, it would be pure conjecture; if you want that answer I can give it to you, but if you want the answer more accurately I would rather look it up and give it to you.

Q. Well, for the present you may answer it the best you can, reserving to yourself the right to correct it.

A. My impression is about 1911.

Q. Had you built no lines north of your Treat Compressing Station before 1911?

A. I would not say that, no sir; I have in mind, however, the development of the lines, as you see them extending north.

Q. Did your company take over any old operating companies or previously existing operating companies in the section north of the Treat Compressing Station?

A. No.

Q. The line there your company built?

A. Yes, sir.

Q. Your line from Columbus to Cincinnati you have said you built in 1907. Where were you getting the gas for the consumers on and along that line?

A. The Cincinnati line was built after the opening up of a new discovery in the Knox-Licking field. There came in a very large body of gas rather unexpectedly, as sometimes happens in the gas business, and we acquired a large acreage there and were able

1514 to purchase considerable quantities of gas and we had an excess at that time over and above what our regular market was taking, and the line was built to Cincinnati to dispose of that gas as being the nearest attainable market. You understand, Senator, in relation to Cincinnati, that our supply at Cincinnati is relatively very small compared to the entire consumption at Cincinnati. We do not begin to supply near the demand.

Q. Relative to the map, Ohio Exhibit Number 2, will you indicate by some of the names appearing thereon the location of the Knox-Licking Field?

A. The counties are not shown on this map. Mt. Vernon, however, is the County Seat of Knox County. Newark is not shown on this map but is the County seat of Licking county, and if you will indicate on the map a point about five miles east of Granville as shown on the map you will have the relative location of Newark. Generally speaking the Knox-Licking Field would be embraced in that district between the two towns of Newark and Mt. Vernon.

Q. Well, take the Treat Compressing Station as a point from which to indicate the location of your Knox-Licking Field, in other words where would the field be in respect to that station?

A. Generally speaking, south, east and north.

1515 Q. Then when you built your line in 1907 from Columbus to Cincinnati you had a surplus supply of gas produced in the State of Ohio?

A. At that time, yes, sir.

Q. And that line was built, as we understand, to take care of that surplus supply in the State of Ohio?

A. Yes, Senator, but my answer probably should be qualified by another set of conditions, which had a great influence. At that time the development was beginning in West Virginia and representatives of The Ohio Fuel Supply Company had even, at that date, acquired acreage, leaseholds and gas developments in West Virginia. At that time the project of going into West Virginia was in its initial stages of development and in contemplation as a secondary source of supply. You understand there are really two factors controlling in the natural gas business that we always have to contend with; one is the law of diminishing supply and the other is the law of increasing cost. We know in order to keep in the business we have to be constantly looking for new sources and it was with that thought and that idea in mind that when the Cincinnati line was projected we were already putting through the initial stages of development in West Virginia, and the construction of the West Virginia lines was simply carrying out the policy established at that time.

1516 Q. But the point that we are developing now is that whatever you might have had in contemplation and not actually physically constructed lines, was that you had a surplus of gas in the State of Ohio that justified you in extending your lines and extending your service prior to 1909?

A. I would say this; we had a surplus of gas in the State of Ohio over and above the needs of our then present market. I would not say that the line would or would not have been built without the contemplated additional supply from West Virginia.

Q. Not only did you have sufficient gas to justify you in reaching out to the City of Cincinnati, but also you had a sufficient supply to construct lines off of your main line to Cincinnati to supply consumers along that line, did you not, and did you not have in contemplation the furnishing of gas to consumers along that line when you built it in 1907?

A. We had in contemplation the supplying of gas to consumers off that line. Originally the line was built to Norwood. We never extended the line into Cincinnati.

Q. Norwood is a suburb of the City of Cincinnati?

A. Yes, sir.

Q. You might say it is your gate to Cincinnati?

A. I think the corporation line is the dividing line.

Q. And that Cincinnati,—while you were not distributing in Cincinnati yourselves, yet you delivered to a distributing com-

1517 pany in Cincinnati for distribution to consumers?

A. We afterwards made a contract with The Union Gas and Electric Company, which is still in effect, for a certain quantity of gas.

Q. Now prior to 1909, with this surplus amount of gas produced in Ohio, and for which you desired to find a market, you were also extending your lines out to towns and communities in the State of Ohio, were you not?

A. Not from that same source of supply.

Q. Well, I am speaking from your source of supply in Ohio, whether it came from this particular Knox-Licking Field or whether it came from some other field in the State of Ohio.

A. Speaking from the standpoint of general development I would say yes.

Q. Then whatever might have been in contemplation, as an actual fact, or rather existing conditions, you did have at that time a supply of gas for your demands in Ohio with a surplus supply of gas that led you to an extension of lines and to the addition of consumers to your system?

A. We had a supply of gas over and above the then present market needs which led us to continue developing the property, yes, sir.

Q. And to the increase of your market needs in the State of Ohio?

1518 A. That naturally follows, yes, sir.

Q. In the statement made by you yesterday it appears that your Ohio fields are producing quite large quantities of gas at this time; in fact it appears that in the year 1919 your production in the State of Ohio was greater than that for the year 1918; from your statement it would seem that your production in Ohio for the year 1919 is the largest year's production of any year you ever had. If your company is experiencing a shortage in gas, therefore, is it not because of your extensions of service and your addition of consumers to your system?

A. I would think not, except in the sense that you have a certain number of customers; they may be new or old, and you have not enough of your product to supply your customers, in that event you have got a shortage. You may argue that that shortage is due to the fact that you have too many customers, or you may argue that it is due to the fact that you have not enough gas. In that sense the fact that you have a certain number of customers would have its effect.

Q. Well, it is a fact, isn't it, that your production in Ohio, in 1919, was your largest production?

A. Yes, sir; that is true.

Q. Then if you have a shortage in gas it is because of your increased demand in the State of Ohio, or rather in the com-

1519 munities which you serve in the State of Ohio?

A. I think that is very largely correct, Senator, it is due to two factors, an increased demand and not enough gas.

Q. Well——

A. I may say in that connection, however, that while the year 1919 showed us the maximum production of any year since 1910, the year 1920 will not come anywhere near 1919.

Q. But we have been speaking here from the actual experiences of the years that have passed, and we do not understand yet your

explanation or your qualification in your answers as to why you have a shortage in the amount delivered to your consumers when your production for 1919 in Ohio is practically two billion feet in excess of any year's production preceding that time.

A. During the past two or three years, Senator, there has been a largely increased demand for natural gas consumption, owing to the facts that fuel conditions, other fuel has been so short; that has resulted in an increased demand for natural gas, and it has had its effect upon the output and production.

Q. Well, now, how does that increased demand arise and how has it arisen?

A. Many houses that heretofore used coal, that is in furnaces, have come on for gas. There is a largely increased demand for industrial purposes. In fact I could not enumerate, off hand, the number or the character of the increased demands that have
1520 come.

Q. Now, are you meeting those increased demands in the State of Ohio by adding additional consumers, domestic and industrial, to your lines?

A. We are not.

Q. You are not?

A. No, sir.

Q. Then why can there be a shortage, since your production was larger last year than for the years previous?

A. You understand, Senator, this shortage is not a continuous one. It comes during periods of extreme cold weather. Simply putting it in plain language it is that the consumer does not get enough gas; he does not get all he wants. To illustrate, here in the City of Columbus last year there was almost,—within I think about 40,000,000 feet of as much gas put into this town as there was during the extreme cold winter of 1917 and 1918, during which time everybody was satisfied and we had no complaint. But, notwithstanding the fact that there was that small, or relatively small difference in the amount of gas delivered to the City of Columbus, during this preceding winter there were days when the town was almost out of gas. Now, population grows; increased demands come in; increased uses for gas come in over which we have no control whatsoever and the real point is that notwithstanding what our figures of production are, we did not have all the gas the do-
1521 mestic consumers wanted. It was a condition that we could not meet.

Q. Then as we understand you your shortage arises in your inability to meet the requirements of your consumers?

A. Exactly.

Q. In other words, the requirement of your consumers to give them the gas that they need or the gas that they demand or the gas they want.

A. Exactly; it is that difference between the demand of our consumers and our ability to supply, that creates the shortage.

Q. Now in your experience when did that shortage in extreme cold weather begin?

A. So far as The Ohio Fuel Supply Company is concerned, we have had what I might call isolated cases of shortages in various communities for some time; take the towns over in the east end of the system depending upon local fields and not connected up with our main sources of supply, they have had cases of shortage for several years, not real serious. The acute shortage did not arise, so far as The Ohio Fuel Supply Company, is concerned, until this past winter. The shortage, however, for The Northwestern Ohio Gas Company has been a recurrent one and has been for every winter that I have had any experience with the property extending over a period of years.

1522 Q. Now in what particular communities did you experience this shortage in the time that you have just referred to in your answer?

A. The most acute, in the city of Columbus this last winter.

Q. What part of the winter; what months?

A. I think December, January and February.

Q. What did you do or attempt to do to meet that condition?

A. The industrial business was discontinued and all resources turned to here. We took gas from other places to supply Columbus. Our contract requirements for Cincinnati called for I think about 16,000,000 feet per day during the cold weather and we gave them 6,000,000 feet. We gave it to Columbus. We really took gas from the Cincinnati line to give to Columbus.

Q. Did Cincinnati have a surplus of gas so that you could do that?

A. They did not; there was no such thing as surplus gas in Ohio last winter, Senator.

Q. Has your company declined, or is it its present rule or intention to decline to give to consumers, service who apply for service?

A. That question is rather broad, Senator; it embraces a good many things. If you are asking if we have declined to give service, I would say no. If you are asking if we intend to decline, I would say that from now on we will be compelled to take, I think we will be compelled to take—although we have not decided upon a

1523 policy of that kind as yet,—the position that we are unable to extend service any further. And when I say, "Extension of Service" I mean within the limits of the communities where we are already established. We are not taking on any new towns, and have not taken on any new towns for several years past, with the single exception of the little village of Grafton up in Northern Ohio, which is supplied from a local field and whose consumption is very small and is supplied from a local field at a relatively very high price.

Q. Well, to make it clear we will ask you whether, in the communities where you are serving consumers, whether you have declined to take on additional consumers; take for instance in cities or towns in which you are serving gas?

A. We have, and in obedience to the orders of the Fuel Commissioner during the war period, declined to make any extensions to our street main systems over the entire system. Since the ending of the war we have followed that policy. You understand, of course,

that we are subject to the orders of the Public Utilities Commission of Ohio and must obey their instructions and they have control over the subject of extensions. I do not know of any instance
1524 wherein the commission has issued an order or that there has been an application to the commission to issue an order covering such a case as you mentioned.

Q. Well to make it clear I will ask you further, taking for instance the City of Columbus; have you declined to extend your service in the City by refusing applicants for service, gas?

A. We do not have anything to do with Columbus in a retail or distributing way, Senator; we wholesale entirely.

Q. Well, I will ask you to give me the name of some city or town where you do supply.

A. Well, take for instance Zanesville.

Q. Well, in Zanesville have you refused to extend your service by the refusal of gas to consumers who apply to you?

A. Not within my knowledge, Senator. Matters of that kind very rarely reach me; they are handled by the local agents. Not within my knowledge have we refused to make any such extensions, nor within my knowledge have any applications been made to us to make extensions.

Q. Has the Public Utilities Commission of Ohio permitted you to refuse gas to domestic consumers in the towns in which you are engaged in furnishing gas?

A. The question has not been raised, to my knowledge, before the Commission.

Q. But now to make it further clear, I am not speaking of extensions of mains but I am speaking of the connection from the
1525 house to your main where you have the main in front of the house; you are not refusing to make connection in instances of that kind when applications are made?

A. No; I would say not. That is largely dependent upon local conditions and, as I say, it does not come up to me at all, but I would say, as a general policy, we have not refused.

Q. Well, under the orders of your Public Utilities Commission in Ohio you are not permitted to refuse that service, are you?

A. Well, as I said before that is a question that has not been passed upon.

Mr. Eagleson: If you will permit us a suggestion, I believe most of the franchise ordinances have provisions in them that connections will be made where mains are in the street.

Mr. Blue: I did not understand you, Mr. Eagleson.

Mr. Eagleson: Probably much of what you are inquiring about is covered by the franchise contracts under which the company went into the municipalities, that there should be connections given to consumers where mains are along the streets.

Mr. Blue: Well, I might ask him that question.

Q. Under the franchises held by your company in the cities and towns where it does distribute gas are you not required to deliver gas

from your mains to the houses along your mains upon ap-
1526 plication of people along your lines or along your mains.

A. I do not recall a single instance, wherein the franchise expressly imposes upon the company the burden of constructing services from the street mains into a curb box, which is as far as we go. My idea has always been that that burden was imposed upon us by law. But whatever specifications or whatever burden is laid upon us for the duty of making street main extensions in the franchise are nearly always in reference to street mains. I think we have always treated the matter of laying pipe from the main to the curb as part of our public service duty.

Q. And you do lay your lines from your main lines to the curb?

A. Yes, sir.

Q. As you put in your mains?

A. When that is done, yes, sir.

Q. The service line from that point into the building, you recognize, and it is the practice recognized by everybody, for the owner of the property to build that service line himself?

A. Yes, sir.

Q. But the point that I am asking you is this; you don't refuse the service when it is required, to the property owner or the people or the person living along your main?

1527 A. Our distributing systems have been in so long, Senator, and the towns are what we call so thoroughly saturated that we are rarely called upon to put in new services, particularly in the smaller communities. As I said before, I do not know of a single instance where we have refused to lay a service line.

Q. In other words, you recognize the obligation upon you to meet the requirement when it is made upon you by persons along your lines?

A. So far as the legal burden and duty is imposed upon us, yes, sir.

Q. Will you put into the record a statement showing the number of domestic consumers on your lines, for the years beginning with 1910?

A. I think that is already in the record, Senator.

Q. Let us see; may be it is.

A. In the statement furnished to the reporter yesterday.

Q. If it is, I will not ask for it again.

A. It is on the long sheet headed "Sales".

Q. Oh, yes, I see it; you already have it here; I beg your pardon.

A. As I explained yesterday, the column headed "Domestic consumers" takes into account only the domestic consumers supplied direct upon the Ohio Fuel Supply Company's distributing system. It does not take into account the domestic consumers upon the distributing systems where we supply the gas wholesale, such as Colum-
1528 bus, Springfield and Hamilton.

Q. The increased number of domestic consumers of your company shown on your statement filed yesterday was caused by the connections made in response to the requirements of persons along your lines.

A. In part only. That is one factor. Another is that we have

acquired, by purchase, some communities which we did not own in 1910. For instance, when we purchased the Central Contract and Finance property we acquired the towns of Sidney, Piqua, Urbana and South Charlestown and those communities along that line.

Q. But your statement shows that there has been a constant increase even since the purchase of the property referred to in your last answer and has that increase been caused by the recognition of your company to give the required service to those applying for it?

A. Undoubtedly that has had its effect, Senator, yes, sir; the natural growth in the communities would account for that.

Q. Then your company, experiencing the shortage of gas, and notwithstanding that, has, in recognition of its duty to those along its lines, increased the number of consumers along its lines?

A. I believe there are decisions of courts to the effect that
1529 regardless of whether or not we have enough gas to go around to give anybody adequate service, we must divide up what we have. Now, it does not necessarily follow from those figures, Senator, that those increases have occurred in the communities which have experienced shortages. These figures are aggregate figures for the entire system and I cannot tell you, offhand, now where these increases have occurred in the number of consumers. As I said before, we have experienced shortages here before in various sections, but they were, very largely, due to local conditions controlling. The first winter that we have experienced a general shortage was last winter, speaking of the Ohio Fuel Supply Company alone. We are already preparing for shortage conditions next winter by advising all our consumers that they cannot depend upon a supply of gas for the coming winter to meet their requirements.

Q. Your statement in the record yesterday shows that approximately 75 per cent of the gas furnished to your consumers is produced or purchased in the State of Ohio, and of this 75 per cent your statement indicates that 19 per cent thereof is furnished by your company to industrial consumers, and that approximately 54 per cent of the gas procured by your company in West Virginia is, or the equivalent of it, to the amount of 54 per cent, is furnished to in-
dustrial consumers in the State of Ohio. Now, with this
1530 shortage of gas to which you refer, with its attendant dangers, to your domestic consumers, why do you furnish 25 per cent of the gas produced and purchased by you in Ohio and approximately 54 per cent of that purchased by you from the State of West Virginia to industrial consumers in this State?

A. You will notice, Senator, that the deliveries from West Virginia last year were in excess of 2,000,000,000 feet less than they were in 1918.

Q. They were 2,000,000,000 less?

A. 2,000,000,000 less, yes, sir. So that we fell short of what might be called normal delivery from West Virginia by 2,000,000,000 feet last year. We sold the volume of gas indicated in the statement for industrial purposes. But after all, the controlling feature is the cold weather demand. These are aggregate figures representing the entire amount of gas sold for all purposes during the year;

not the volume of gas sold for any particular purpose at any given time or period of 24 hours. Now we were absolutely unable last year to supply our requirements during the cold weather periods, notwithstanding the discontinuance of all industrial gas. We will be unable to supply our requirements this coming winter notwithstanding the elimination of all industrial gas. Now you asked me why we sell industrial gas. The reason is that the domestic consumer has not yet reached a point where he is willing to pay a price sufficient to justify the companies in withholding the sale of
1531 gas for industrial purposes, and until such time as the domestic consumer meets that condition, the companies, in order to live, must and will be compelled to sell industrial gas. But I want to make clear this point, that notwithstanding all that, it is the cold weather condition that controls. Then is when the acute demand arises, and we had not enough last winter to meet that demand, regardless of the industrial situation and speaking from the domestic standpoint purely. So that we might sell a very large volume of industrial gas during the summer period and the aggregate figures would run up very high, and yet would have absolutely no reference or control to the winter condition at all.

Q. Independently of the gas you furnished to industrial consumers in Ohio you have approximately enough gas in Ohio to take care of your domestic consumers?

A. Absolutely not.

Q. How much are you lacking or how much do you lack in gas produced and purchased in Ohio to take care of your domestic consumers if you would eliminate the quantity sold by your company to industrial consumers?

A. I cannot tell you that. That is looking ahead. I cannot tell what the weather conditions are going to be next winter. I cannot tell what the result of our drilling campaign will be between now and winter. But based upon present indications, assuming a
1531*a* normal winter and a mean average temperature somewhat similar to last winter, I would say that we will be 25 per cent short of our domestic requirements in cold weather this coming winter. That, of course, you understand, is purely an approximation.

Q. Well, now in quantities of gas how much would that be?

A. I do not know.

Q. Well, I mean your twenty-five per cent; stating your twenty-five per cent in gas quantities; what would the quantities be?

A. I cannot give you that.

Q. To state the question in another way, when you say that you will be short 25 per cent how much do you mean in thousands of feet of gas by that 25 per cent?

A. I cannot answer that, Senator, for the reason that I would have to go into our records and get out the delivery charts and make or have made a series of complicated calculations to determine the average daily deliveries, determine the peak load deliveries, and then calculate from that the estimated volume of gas we may have,

and when I am though I would have a not much better approximation than I have given.

Q. Stating it in another way, what would the base figures you have given amount to, from which you made this computation of a shortage of 25 per cent?

A. I am simply basing that upon the general conditions which existed here in Columbus last winter and over the system,
1532 and assuming which I believe I have a right to assume from conditions as we know them now, that they will be somewhat worse, if not considerably worse, this coming winter than last winter. As I have explained, after all it is merely an approximation.

Q. Well, assuming that conditions for the coming winter will be similar to the conditions of last winter both as to weather and as to gas supply, what quantity of West Virginia gas would your company require to meet your demands?

A. All we can get through that line?

Q. In the State of Ohio?

A. All we can get through that line; the full capacity of that line if they can deliver it. They are supposed to deliver us approximately 50,000,000 feet a day. They delivered us during the cold weather last year 26,000,000 feet a day. We have been vigorously going after them over there to increase their output and deliver to us, and they say they are not sure they are going to increase it at all. As applied to local conditions in Ohio we know that of the producing wells drilled to date the average production is 34 per cent under what it was previously.

Q. Well, can you state, and will you do so in concrete form, the quantity of gas that you would require to meet the require-
1533 ments in Ohio, assuming that the conditions during the coming winter will be similar to those of last winter?

A. Do you mean by that question, Senator, the entire output over the system to meet all domestic requirements?

Q. To meet your requirements in the state of Ohio; what quantity of gas, under the conditions indicated in the last question, would you require from the State of West Virginia?

A. I cannot answer that off hand.

Q. In my question, of course, you understand what I am confining my question to the requirements of consumers on your system and not the entire State of Ohio?

A. Well, I understand you are making your question as to the requirements upon the Ohio Fuel Supply Company's system including its own consumers and those with which it has contract obligations?

Q. Well, whatever demands,—whatever legal demands might be made upon you in the State of Ohio.

A. The only way I know that we can get an approximate answer to that would be to get the peak load requirements for last year plus an estimate as to the amount we were short, and I cannot give you those figures off hand.

Q. Now, this 25 per cent that you refer to, as we understand you, is to those whole periods when you require—or when your consumers

require what you call the peak load, and not to the every day demands upon you?

A. It is not to the everyday demands; the domestic consumer in the cold days of January or February will require from six to seven times the quantity of gas that he does in the summer time, and when I speak of an estimated 25% shortage I refer to the cold weather period alone.

1534

Q. And to meet that demand for such days, and to give to your consumers in the State of Ohio that gas, you are demanding that there shall be sufficient gas delivered to you from the State of West Virginia?

A. We are demanding, in so far as we can, yes, sir, because we have a contract for it; we want it; we believe our customers are entitled to it; we believe we are entitled to it, and we have been very strong in our criticism of the man at the other end of the line because he has not delivered to us.

Q. Forgetting that he has some obligations to the folks along his own lines?

A. Not at all; whatever obligations he may have that are prior in time and point of right to ours.

Q. The communities served by your Company are so near the fields of West Virginia, from which the West Virginia gas comes, that the weather conditions in the two communities are about the same, are they not?

A. I don't know.

Q. In other words, when you have your peak load demands over here, there are conditions in the West Virginia sections so similar that there is a peak load demand over there; isn't that right?

A. Presumably; it may be a coincidence in point of time such as to create those conditions, yes, sir; but as to the actual facts, I don't know.

1535

Q. And what you are demanding, so far as you can demand it, is that you may have an adequate supply of gas for the requirements of your consumers in the State of Ohio in those peak load times?

A. What we are demanding is what we believe we have a right to, in justice, and under the contract obligations entered into years ago, to the extent of their ability to perform. In the sense that we are demanding an adequate supply of gas, we know that the chances are that cannot be done.

Q. Why not?

A. Because the gas supply is too rapidly diminishing.

Q. Now on that phase of the question, you testified in some respects on yesterday; what do you mean when you say that the supply of natural gas is diminishing; what do you mean by that?

A. I don't know that I can answer that better than to quote substantially the statement of Doctor White, the chief geologist of the State of West Virginia, made before the Public Utilities Commission of Ohio, wherein he said that in his judgment practically 75% of the available supply of gas in Ohio and West Virginia was exhausted.

Q. You mean that you accept Doctor White's statement as a fact, that 75% of the available supply of natural gas in the State of West

Virginia and the State of Ohio,—both states—is practically
1536 exhausted at this time?

A. I mean that I believe that Doctor White is as competent as any living man to express his opinion upon the known facts.

Q. Well, do you accept his opinion as a fact, or do you, as a satisfactory statement, agree that the facts stated by him are true?

A. I believe he had sufficient ground to express his opinion as a correct conclusion of fact.

Q. What is your own opinion on the subject, independently of Doctor White?

A. I cannot say that I have sufficient knowledge of West Virginia conditions to express an opinion in that regard.

Q. Well, do you accept Doctor White's opinion as a correct opinion?

A. Very largely so, yes, sir.

Q. Now let me ask you this question; you portrayed conditions yesterday in the event that you were not furnished an adequate supply of gas,—or rather the contract supply of gas; now in view of what you have just said, how long, in your opinion, will there be sufficient gas in Ohio and West Virginia to furnish consumers, as a commercial business?

A. I could not hazard a guess on that, Senator Blue, under present conditions. Any answer to that question would have to be modified to take into consideration so many factors; if you are asking me what the remedy for the present situation is, I can give you my opinion. In my judgment, it is highly essential for the do-
1537 mestic consumers and the public authorities of both States to recognize the fact that we are dealing with a vanishing product. The condition of profligacy and waste must cease. We must devote the product to those uses for which it is best fitted, and we must put the price of the product at such a point as will, of necessity, compel the elimination of waste and misuse by the domestic consumer. If the domestic consumer will recognize that, and cooperate with the Gas Company, the length of time within which available commercial natural gas service can be given to domestic consumers will be very greatly lengthened. If they will not, and if they persist in their attitude by forcing the companies to sell very large quantities of industrial gas,—and I do not mean to say by that that you can eliminate industrial gas entirely, because you cannot, in my judgment,—the life of the natural gas business,— the life of the field, and the time within which the domestic consumer will receive and be able to utilize the best fuel ever created by nature, will be very much shortened.

A recess was here taken until 2 oclock p. m.

1538 Supreme Court of the United States, October Term, 1920.

Nos. 20 and 21, Original.

THE COMMONWEALTH OF PENNSYLVANIA, Complainant,

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO, Complainant,

vs.

THE STATE OF WEST VIRGINIA.

Wednesday Afternoon, July 21, 1920.

And now the hour of 2.00 o'clock P. M. having arrived, hearing resumed pursuant to recess.

L. B. DENNING resumes the stand.

Cross-examination (continued).

Mr. Blue:

Q. You have spoken of your efforts to find gas in your fields in Ohio, I mean the fields that your company owns; have you been able to increase the production of gas in your Ohio fields?

A. As compared with what time, Senator?

Q. Well, compared with the year 1919, basing your answer upon your experience in the months of 1920?

A. The first six months' period of 1920, as compared with the corresponding period of 1919 shows a decrease I think. (After examining papers:) The first six months of 1920 ending with the last day of June, show a production to date for the year in
1539 all fields in Ohio, of 83,720,000 feet open flow, while for the corresponding period of last year it was 87,930,000 feet, open flow.

Q. And you spoke yesterday of the depletion of your fields in the state of Ohio; state whether or not in your opinion you regard your fields—your Ohio sources of supply, as depleted and if so, to what extent?

A. Well, taking the fields as an entirety and regarding them as one unit, my judgment is that the fields are considerably depleted, just how much or attempting to apply percentages, I am unable to answer. As I have said before, I think the best indication as to the measure of depletion is the fact that in what is called "inside territory,"—and by that I mean wells drilled in known fields, in close proximity to other wells,—show a decrease of 34 per cent as compared with 1914.

Q. Do you know whether that percentage of decrease is rapidly increasing?

A. I couldn't tell that until later on, when we get our figures of production later in the year. Those are the latest figures which we have.

Q. Are any of your fields in Ohio—I mean by that your company's fields—are any of them now exhausted or any of
1540 them about exhausted?

A. Yes, portions of fields have become exhausted. Take for instance the old Sugar Grove field. That at one time was a very prolific field for the production of gas, some years ago. It is today producing only in limited portions, with wells very small. We get wells in that territory and we will operate wells, with a capacity as low as fifty and sixty thousand feet daily open flow. Of course abandonments of individual wells are being made, I was going to say, almost daily, but right along continuously.

We have drilled probably in our entire operations in excess of three thousand wells. We have today under operation approximately fourteen hundred wells, so that during our period, or the history of our operations we have abandoned in excess of sixteen hundred wells.

Q. Based on your experience and your knowledge and assuming that the conditions will exist in the future as they are now respecting demand for gas, how long will your present supply of gas in Ohio continue?

A. The present supply of gas?

Q. Yes, or rather how long will your fields in Ohio continue to supply you with gas in marketable quantities?

A. That is purely a conjecture, Senator. I don't know that I could give even an approximate answer to that. There are
1541 too many "ifs" in it.

Q. Well, I framed the question to you in the way of assuming that the demand for gas will be the same in the future as it has been in the past, and from your knowledge of and your experience with your gas fields in Ohio, whether or not you can state approximately as a matter of opinion the length of time that your fields will furnish you gas, such quantities of gas as you can use commercially?

A. Well, that is still extremely difficult to express an opinion upon, and any opinion expressed must be after all, nearly conjecture. You take present conditions of fields and attempt to supply the present number of domestic consumers without the discovery of any additional source of supply, I would say that we would not last more than a few years. There could be of course an elimination of various communities and cutting down and we could continue to supply gas for a good many years.

Q. May I ask you to be just a little more specific and to say in numbers what you mean by the expression of "a few years"?

A. Well, bearing in mind the fact that any statement I may make on that is, as I have said before, simply sheer guesswork on my part, I would say, to maintain present conditions possibly, five

or six years—eliminating any supply from West Virginia—could render some form of service to the entire domestic consumer.

1542 Partial service could be rendered to a limited number of consumers for twenty to twenty-five years. I hesitate very strongly to express an opinion on that because the factors are too uncertain, and developments of one or two or three years might change the entire situation and make my predictions entirely unreliable—more unreliable than they are now.

Q. Well, I will have you state it then in this way: Assuming that you receive no gas from West Virginia, how many years would you conjecture your fields in Ohio would furnish you gas to supply your consumers in the State of Ohio, assuming the same number of consumers in Ohio as you had at this time, and consuming gas in the quantities that they consume at this time?

A. Won't do it now. We would meet that situation immediately; they would not do it last winter.

Q. As to the quantities for peak loads upon the days when your present supply in Ohio will not supply your demands in Ohio, you are unable, as we understand it, to express the same in quantities?

A. Yes, that is true.

Q. But as we understand it, your shortage on peak-load days for last winter was about 25 per cent of the amount that you required?

1543 A. No, I didn't say that, I don't think; at least I didn't intend to say it.

Q. Well, we will have you state it again in the way that you did intend to state it?

A. I stated, as I understood your question—I was forecasting as to what would occur this winter—this coming winter—and I expressed the opinion that in view of conditions as they were now, that we would probably—might have at least—a twenty-five per cent difference between the demands or requirements of our consumers and our ability to supply it. As to last winter—we can reach some conclusion on that by a knowledge of the figures which I have not right here.

Q. Assuming that conditions are the same, what would you estimate as a matter of opinion, your percentage of shortage on peak-load days, to be, then in the winter following the winter for which you give the twenty-five per cent?

A. Well, having in mind the fact that the gas supply has a tendency to diminish and is diminishing at all times unless a new supply is brought in through additional wells or new fields, the tendency will be to increase that twenty-five per cent maximum next year, rather than diminish it, and in the succeeding years following it.

1544 Q. Would you indicate, please, on the record, the rate or the amount of that increase yearly?

A. I couldn't undertake to do that, Senator.

Q. Well, so as to get it specific, what would you estimate your shortage to be in the winter of 1920-21?

A. I have already said that unless something intervenes, which

we do not know now, that I would anticipate a twenty-five per cent shortage for next winter. I am unwilling to go beyond that, because I can't undertake to say what will happen beyond it.

Q. You are of opinion, however, as we understand you, that that increase in shortage will grow with the succeeding years?

A. I see no other outcome to it under the known facts, as we know them now.

Q. In other words in your opinion that will be a progressive increase in the shortage with the succeeding years?

A. Always assuming that there are no other commercially available sources of supply discovered, that would be the case.

Q. Do you know of any other sources of supply of gas in the State of Ohio than those that you know now?

A. I do not. I am unwilling to predict on that, because I have in mind that one of the best geologists in the country some
1545 fifteen years ago eliminated from possible consideration of source of supply a large section of southern Ohio, which ten or twelve years later became one of our main sources of supply. Now, if a trained geologist is in error to that extent, I certainly am not willing to express any opinion in that regard.

Q. Well, to put it in just plain language, the end of the supply of gas in the state of Ohio is not far away; is not that right?

A. I would say that we are approaching the end of the gas supply, not only in Ohio, but in West Virginia as well. It is one of these natural resources of the country, like our timber, that we have been very profligate in the use of, and I think just in recent years we have waked up to the value and the necessity of conserving.

Q. Inasmuch as the winter of 1919 is past and you know, therefore, as to the actual experiences, we will ask you to state the shortage of gas to meet your requirements during that winter?

A. I can't give you that, Senator. I can't give you that, for the reason that all the figures we would have would be the actual volume of gas sold. Now, just how far short we fell of requirements, I can't say because I don't know how much the consumers
1546 would want. I know that so far as domestic gas is concerned, there were days in Columbus here when sections of the town were entirely out of gas.

Q. You have stated on direct examination certain conditions which in your opinion would apply if you can not get West Virginia gas. Let us ask you now what conditions will follow when this diminishing supply of gas has failed, or in other words when it has been used?

A. You mean when the entire supply fails?

Q. Yes.

A. Well, there is only one answer to that; the gas companies will all be out of business, and the consumer will have to turn to some other form of fuel.

Q. That is a condition that you who are engaged in the gas business recognize is approaching, and approaching you very rapidly, do you not?

A. It is approaching undoubtedly; how rapidly is a matter of opinion only.

Q. And the conditions that you referred to as to your consumers in Ohio, is a condition that you know is coming to those consumers?

A. Ultimately, just as we know that every man will die some time.

Q. And the conditions that you referred to relative to the value of your property, your lines and your mains and the use
1547 that can be made of them, is a condition that you who are engaged in the gas business know is certainly approaching?

A. Some time or other, yes, sir. We don't like to see it hastened unnecessarily, though.

Q. As your supply of gas decreases, what will your company do; I mean from this time on and before you reach the time when it is no more commercially profitable to sell gas to consumers?

A. That is a problem which in my judgment at the present time more nearly concerns the consumer than it does the companies; in this, that it appears to me that the consumer has this question to answer; whether or not we will go along as we have been going, with admittedly wasteful and unreasonably large consumption of gas and all parties, both consumer and company, be out of business so far as natural gas is concerned, in a relatively short period of time, or will the consumer and the companies operate together and co-operate and prolong the life by reducing the use of gas and eliminating wherever practicable the waste and unnecessary use,—in other words true conservation. By so doing the length of time in which the consumer may be able to use this fuel will be very greatly extended. It is theoretically possible for the gas companies to so conduct their business that in the end when the time comes
1548 they must cease business, by reason of the exhaustion of their supply, that they will have the property converted into cash or salable property so as to be able to return to their stockholders their investment. Practically I don't think that will be the case, at least in some instances. There will inevitably be a loss.

Q. Inasmuch as your supply of gas will not be sufficient to furnish your consumers continually and indefinitely natural gas, what are you going to do?

A. In what respect?

Q. Well, as your supply decreases, are you going to reduce the number of your consumers, contract the area that you serve, or what are you going to do?

A. I don't know, Senator. I wish I did.

Q. Well, inasmuch as you can't continue to serve them all with gas because it is diminishing, will you not be required to contract your service and to serve a fewer number of consumers, if you are to give them that service that you spoke of on yesterday, namely, a continuity of service?

A. From the standpoint of good service, good business operation, my judgment is that that would be the proper thing to do; whether or not we will be permitted to do it by Public Service Commissions and other authorities I don't know.

1549 Q. Now, when you do reduce the number of your customers, will you continue to stretch this gas out over the whole of your line or will you contract your lines?

A. I still must say I don't know. That involves the question of policy and mingled with it a determination of legal rights which remain to be solved, and I can't undertake to forecast it.

Q. Well, in the end, in the nature of things, you will have to contract your lines of service with a diminishing supply, if you are to give that continuity of service that you spoke of on yesterday?

A. Undoubtedly that is true. After all, the fundamental question is whether or not we will be permitted to give good service to a more or less limited few, or attempt to give poor service, or practically no service at all, to a large number. Now, which?

Q. You say, as we understood you on yesterday, a poor service in gas is practically equivalent to no service?

A. It is true. That is true, and yet we must not lose sight of the fact that the women who are accustomed to gas service are exceedingly reluctant to let any kind of gas service get away from them.

Q. Now, with a given quantity and that quantity diminishing rather than increasing it will not be business for you nor practicable for you to do other than to contract your service in order

1550 to give a service and such service as you stated on yesterday was necessary to give to the consumers of gas; is not that right?

A. That would be the logical and good business, sound business sense and good service thing to do.

Q. Well, as a practical proposition, isn't that the thing that you will have to do?

A. We will have to come to one of two things, yes, Senator, as I have been trying to say, we will have to do that or attempt to give more or less limited and poor service to the total consumers. Which we will be permitted to do I do not know.

I recall in Indiana when this question arose, there was a very strong effort made through the courts to compel the division of what little gas supply there was amongst all. Now, if you are called upon to make a choice between communities to which community are you going to give it? We have an illustration of that before the Public Service Commission right now, in the village of Saint Clairsville. We procure our supply from another company for Saint Clairsville and have no source of supply of our own, and the company supplying us has served notice upon us that they haven't gas to give us for Saint Clairsville. We have applied for permission to withdraw from the city and we are very vigorously and bitterly contesting it, and the attorneys for the village of Saint Clairsville are exercising all

1551 their ingenuity and skill to hold us and the other company there. Now, in effect there will be a battle, when this question arises; there will be a battle between communities in a small way, just as there is one between Ohio and West Virginia as to which is going to get gas. We are giving an illustration here as to what is going to come all over the state.

Q. Well, now, from a practical standpoint, won't you find your-

self in this position, that if you undertake to give service to all, with a diminishing and failing supply, that your service will be such that your consumers will not want the service?

A. That will ultimately come, yes.

Q. And will that not force you to the contracted-area service, or else give no one any service satisfactorily?

A. I think that is true, yes.

Q. And is this not further the practical situation that with a limited supply of gas and a diminishing supply, when that time comes, when your service is not satisfactory to the consumers, that it will be more practical for you from a financial standpoint, and the only way that you can maintain yourself as a financial proposition, to restrict your service to a limited area and to a limited number of consumers?

A. That would be the more practical way to handle it, yes.

1552 Q. Well, the fact is that it will not be practical from a financial standpoint any other way, will it?

A. I say that would be the more practical.

Q. Well, isn't it the only practical way from a financial standpoint?

A. Yes, I would go that far and say it is the only practical, from a financial standpoint, from a standpoint of company operations.

Q. That is what I am driving at.

A. From the standpoint of company operations.

Q. From the standpoint of company operations?

A. Yes, that is true.

Q. That would be the only practical way that you can then operate?

A. That time may come and doubtless will come when that condition will obtain.

Q. And these conditions and these practical propositions I have just been asking you about must ultimately and necessarily arise, whether you get gas from West Virginia or whether you don't get gas from West Virginia; is not that true?

A. That is a question of time in my judgment.

Q. In other words you mean to say that the only difference is it will be postponing for you the day, if you get this gas from West Virginia?

A. Yes.

1553 Q. As your supply is diminishing and you are contracting your lines what are you going to do with these lines that you have eliminated?

A. I don't know.

Q. Now, on your direct examination you said that your original capital stock was $2,500,000.00, and that your present capital stock is nineteen million and some thousands of dollars. Will you state, please, whether this increase in your capital stock has all been made by the actual payment of money for this stock or has it been increased by other ways?

A. Actual payment in cash for the stock.

Q. It has all been paid for in cash?

A. I think that is my understanding, yes, sir; I don't know of anything that has not been.

Q. What surplus, if any, does your company have?

A. (After examining paper): Surplus from operations $17,759,926.98. You understand, of course, Senator, that is merely a book figure.

Q. That surplus is an earned surplus, is it?

A. Surplus from operations, yes, sir.

Q. In addition to this surplus of seventeen million and some thousands of dollars, have you any reserves or have you laid aside reserves on account of depletions or for any other purpose?

1554 A. Reserve for depreciation, $3,841,364.54.

Mr. Eagleson: Just a minute, will you read the question to which that last was an answer.

(Previous question repeated.)

Q. That was reserves earned from operations of the properties?

A. Yes, sir.

Q. On your direct examination you stated that your investment on your books as of May, 1920, represents $24,580,000.00, and materials on hand of $1,159,000.00. I will ask you if this item of investment includes or is made up rather of appraisals of your properties?

A. No; that represents actual cash outlay at cost for our physical properties.

Q. Will you state, please, somewhat in detail—as much as you may be able at this time—the items that go to make up this sum of $24,580,000.00.

A. I couldn't give you very much detail because I have not the detail sheets with me. I may say that this represents the investment or cash outlay in the construction of lines, the construction of the distributing systems, the drilling of wells, procuring the leases, and generally those items which are charged to investment.

1555 Q. Does the item of $24,580,000.00 include any item of valuation for your leaseholds?

A. It does not.

Q. That is exclusive——

A. Exclusive; I gave you exclusively the actual cost of the investment as shown by our books, of the physical properties, exclusive of any valuation of leaseholds or any cost of leaseholds on any operated acreage. Under our method of accounting we do not charge into investment any expense in connection with taking a lease until it is actually producing gas and we add nothing then of that item of physical property of unoperated acreage after it is drilled and producing gas, other than the actual cost of securing the lease.

Q. You stated on direct examination that your original capital stock was $2,500,000.00, and also that your capital stock is now nineteen million and some thousands of dollars, and your investment $24,580,000.00; was the increase to the two and one-half million dollars, actual money paid in, or does that increase represent money

and surplus, stock dividends, or other items, other than actual cash?

A. The twenty million dollars capitalization represents cash paid in—cash or property actually paid in. It is just in my mind now that when the Northwestern property was bought some years
1556 ago, we exchanged stock for stock; that became a part of the capital stock. There are no stock dividends in it; I will say that much.

Q. The acquirement then of the lines of the Northwestern Gas Company was a stock transaction and not a cash transaction?

A. Not a cash transaction; we exchanged Ohio Fuel Supply Company stock for the entire stock of the Northwestern Ohio Natural Gas Company as I recollect it.

Q. Do you mind the amount of stock given by your company for the stock of the Northwestern Company?

A. I can not give you the number of shares off hand.

Q. I mean in dollars?

A. Oh, in dollars and cents that cost $5,550,050.00 in stock for the stock of the Northwestern Natural Gas Company. It is carried on our books at that figure today.

Q. And what was the stock in money, stating it in dollars, the transfer of your company in that exchange—I mean the stock of the Northwestern gas?

A. You mean upon what basis?

Q. You may state it either way?

A. I don't recall, now, Senator, just what proportions they were; I know that was the aggregate amount of stock and that is
1557 the way it is carried on the books, but just what the proportional basis was I don't now recall.

Q. Does your company have properties included in your investment other than your oil and your gas properties?

A. I am not sure that I understand your question, Senator.

Q. Well, does your company have properties other than your oil and gas properties that are represented in your capital investment?

A. Not in the items I have given you, no, sir. I gave you the figure of $24,588,676.99, which represented simply the cost value of the actual physical property, main lines, transmission lines, wells and distributing system. Now, we have interest in other property through stock ownership which are not included in that figure.

Q. What is the value of such properties, and what are they?

A. The Northwestern Ohio Natural Gas Company, the figure which I have given you, carried on our books $5,550,000.50; our interest in the United Fuel Gas Company, carried on our books at $4,410,000.00, and the Point Pleasant Natural Gas Company at $50,000.00; the Depositors Realty Company, which represents simply a small amount of stock which we own in this Columbus Bank Building here, that went into the hands of a receiver some years ago, and we had to take stock for our share of it, amounting to $4,734.00, and two or three other minor, little items, amounting to fifteen
1558 hundred dollars. The total amount of our investment, including the physical properties and the stocks in other com-

panies of which I have spoken, amounts to $34,574,960.99. That does not include material and stock.

Q. On your direct examination yesterday, you said The Ohio Fuel Supply Company had prior obligations to its own consumers which it supplies direct; that the obligations to supply Columbus, Springfield and Hamilton were secondary. Will you please explain what you mean in your statement when you said that your company has prior obligations to its own consumers which it supplies direct?

A. That was based upon what I believed our duty as a public service corporation to be, that duty being to supply those consumers in those communities, towns and cities where we have distributing systems and are engaged in producing, transporting and delivering gas from the field to the consumer through our own lines, assuming our public service obligation to be where we have voluntarily held ourselves out as a public service corporation primarily to our own consumers, and as separate, and distinguished, from those companies which are buying gas from us for the purpose of re-sale to their own consumers, where they are charged with the public service duty direct, and not us. Our duty in our own communities is measured first by the obligations of our franchises in that particular community; second, by our contract, which is also controlled by the rules and regulations of the Public Service Commission—our contracts with individual consumers. We measure our obligation to those communities where we are supplying gas wholesale for re-sale by the terms of a private contract between the parties.

1559

Taking for illustration the contract with the city of Columbus, or not with the city of Columbus, properly speaking, but between the Ohio Fuel Supply Company as a supplying company on one side and The Columbus Gas and Fuel Company and The Federal Gas and Fuel Company, owning the distributing systems in the city of Columbus, and being charged with the obligation of distributing gas in the city. The contract between ourselves and these two companies, dated in 1914, entered into with the knowledge, if not the approval of the Public Service Commission, specifically provides that The Ohio Fuel Supply Company shall have the right to supply its own consumers and that those towns are entitled to only as much gas as may be left in the event of shortage after supplying our own consumers. In other words it is an obligation limited by contract.

Q. Is not the city of Columbus dependent upon your company furnishing to the distributing companies in Columbus, gas for distribution then by the local companies to the consumers?

1560

A. Whatever gas the consumers in the city of Columbus obtain for their use from either of the distributing companies operating inside the city limits is obtained from The Ohio Fuel Supply Company.

Q. And unless you supply the gas to those distributing companies there will be no gas supplied to the consumers in the city of Columbus?

A. That is entirely true.

Q. That is likewise true of Springfield?
A. Yes, sir.
Q. Dayton?
A. We have no connection with Dayton.
Q. You have no connection?
A. Likewise true of Hamilton, Middletown.
Q. You mean that Hamilton and Middletown get no gas unless you furnish the local distributing companies there with gas?
A. Yes, sir.
Q. And under your construction of your contracts and your theory of your duty to your own consumers, you have the right to shut off the gas from the cities of Columbus, Springfield, Hamilton and other distributing companies, if it is necessary for you to have the gas to furnish your own consumers?
1561
A. The contracts call for that—contain a provision giving us that right.
Q. In other words you have the right to withdraw the service from Columbus, Springfield, Hamilton and other points that are on locally distributing companies when you need the gas for your own consumers?
A. For our own domestic consumers.
Q. In other words to express it in words, you give your own consumers the priority of service?
A. That is true.

Redirect examination.

Mr. Eagleson:

Q. In reference to your last answer, Mr. Denning, I believe you said that you had the right to limit the supply of gas that you would deliver to local distributing companies for distribution to consumers to such an extent as would first give your own company's domestic consumers a supply before supplying such distributing company gas for even its domestic consumers, and that that was generally the practice of your company in circumstances of that kind. Is it not a fact, if a fact, that whatever practice of that character you had or do in that connection, you do as a result of the specific provision or authorizing in your separate contracts with these companies?
1562
A. That is true, each contract contains a specific provision providing for that condition.
Q. You spoke of a capital-money-investment as of May, 1920, of $24,588,000.00 and some odd dollars; would you say that the value of the property as it now exists would be substantially greater or less than that?

Mr. Hoffheimer: That is objected to as incompetent, irrelevant and immaterial.
The Commissioner: Note the objection.

A. Substantially greater.

Q. You spoke of a surplus of something like seventeen million dollars from operations as a book item; what became of that seventeen million dollars, or how was it used?

Mr. Hoffheimer: The same objection, and also objected to as not proper redirect examination.

The Commissioner: Note the objection and let the witness
1563 answer.

A. Surplus can represent only two items, either investment of cash in the bank or securities in some form or reinvestment in the property. In this case it is combined in both items, largely reinvestment in the property.

Q. You spoke on cross-examination of the possibility of some time in the future being confronted with the restriction either of the number of consumers of the company or the amount of gas given to each consumer; state whether or not that situation is not at the present time in the State of Ohio largely if not entirely under the control with reference to eliminating municipalities or consumers from the lines of the company, within the jurisdiction of the Public Utilities Commission of Ohio?

Mr. Hoffheimer: That is objected to as calling for a conclusion or opinion of law.

The Commissioner: Note the objection and let the witness answer.

A. The last legislature in the state of Ohio enacted a law which attempted to confer upon the Public Service Commission of Ohio exclusive jurisdiction to determine and pass upon the right
1564 of any utility to discontinue service when once established, requiring an application to be made to the Commission and its authority to be obtained before service could discontinue, so that as the situation now stands on the face of things at least, the matter not having been contested, exclusive jurisdiction lies with the Public Service Commission, to grant permission to withdraw service from any community.

Q. You attempted to say on cross-examination in answer to an inquiry, that there would be to your company during next winter a probable shortage of what you might estimate to be twenty-five per cent in the supply of gas which you might have, as compared with the demand of your consumers. What do you mean by that? That is, do you mean that as covering a period of a day or a month or through the winter season, or what?

A. What I attempted to do in expressing that opinion was to give an opinion only as to what difference there would be between the amount of gas demanded by the total number of domestic consumers on a cold day during cold-weather periods, and the amount of gas which we would have available to supply that demand, and I estimated it at approximately twenty-five per cent.

Q. And this estimate was based on all the consumers of the
1565 company or with the consumers other than domestic, eliminated?

A. With the consumers other than domestic eliminated, assuming the extreme demand of domestic consumers during cold weather periods lasting a day or two or two or three days at a time and our ability—the amount of gas which we would have to supply it.

Q. I ask you if when you answered that question you had in mind that you were to procure the gas during the coming year that you are now and have heretofore been obtaining—natural gas?

A. I had in mind all available sources, including our supply and possibly supply from West Virginia.

Q. Mr. Blue's inquiry to you along the line of peak loads, with reference to dates; during the winter season of last winter for illustration, the cold-weather period would constitute a peak-load, so-called peak-load demand for what periods of time?

A. It varies entirely with weather conditions. We have a seasonal peak load and a daily peak load.

Q. Well, that is what I am getting at——

A. I see.

Q. The question and the answer thereto didn't to my mind comprehend fully the question of peak loads and gas companies in the winter season in Ohio.

1566 A. Using the term peak load in this sense, meaning the greatest amount of gas which the domestic consumer requires or thinks he requires to meet his needs at the time, during very extremely cold weather; in other words the greatest amount of gas that will be required of you at any particular given time. Now the seasonal peak load will always reach us during the cold-weather periods. We might have a mean average temperature of say 40 degrees; go along that way for practically twenty days out of the month. There will come a sudden drop in temperature and the mercury will go down below zero. At once every one begins to turn on his gas, getting cold, and the demand becomes a peak very much greater and the quantity of gas required is at once increased; that is a seasonal demand, a seasonal peak load which always reaches us during the winter; it may last only a day or two at a time; it may last for two or three weeks, depending entirely on weather conditions which we cannot forecast. For instance, during the winter of 1917 and '18, in February, 1918, we had a continuous period of about four weeks of nearly zero weather, at times below zero. That was an abnormally hard drag upon every gas company in the business. Other winters we have gone through with a much higher mean average temperature, and the demand has not been so great; it affects the consumption.

1567 There is a daily peak load even in the summer time, running usually during the breakfast hour in the morning as a rule, but at noon there comes another, due to the preparation of the noon meal, not being so great. The evening meal is what is called the "supper peak," is greatest—well, I won't say that either, the breakfast peak is usually the greatest of all, particularly during cold weather, because people are prone to turn on everything they have got so as to get the house heated up quickly, so we have the three

daily peaks varying according to use, and the seasonal peak, which is almost entirely controlled by weather conditions.

Q. Now you spoke of there being times on your system when the consumers of your company and consumers of local distributing companies which you supply, being practically out of gas last winter; did you intend your suggestion that you would be short twenty-five per cent of the amount to meet the requirements, to include a condition like that, or would that not constitute a one hundred per cent shortage of gas?

A. It would certainly be one hundred per cent as applied to those districts that didn't have any gas. What I had in mind was taking our entire requirements over our entire system and speaking of the possible twent-five per cent.

1568 Q. I believe you have testified both in direct examination and on cross-examination that your company is doing all it can to maintain, by reason of development and purchase, and every available means of maintaining, the gas supply to its consumers?

A. We believe we are doing everything that we can; we are doing everything that business experience and knowledge suggest. Among other things we even voluntarily increased our purchase price for gas in the fields, fifty per cent in the last ninety days to encourage production by others.

Q. In discussing the main line of your company that carries gas to the south-west, to Cincinnati, on cross-examination you spoke of it being constructed about the time that the so-called Licking-Knox county gas field of Ohio was being developed by your company, and that this line has been used in the transmission of gas from that field, together with gas from West Virginia to Cincinnati and the communities on the line to Cincinnati; I want to ask you if it is not a fact that at the same time and in connection with the construction of this pipe line, you were not in possession of and obtaining areas of prospective gas territory in West Virginia from which you also intended or at least hoped to obtain the natural gas for trans-

1569 portation through that line being so constructed to your consumers?

Mr. Blue: The State of West Virginia objects to the question because improper, irrelevant and immaterial and not proper redirect examination.

The Commissioner: Note the objection and let the witness proceed

A. That is true. We at that time had acquired considerable acreage in West Virginia and had already drilled and was producing or able to produce a considerable quantity of gas, and the Cincinnati line was built as a part of the plan, relying on obtaining gas from West Virginia as I stated this morning.

Q. Mr. Denning, is it not a fact, if you know, that not only your company but all natural gas companies supplying natural gas to consumers in Ohio, are constantly endeavoring and living in hopes of discovering additional deposits or supply of natural gas or finding natural gas in sands deeper than the sands from which they now

obtain it, for the purpose of continuing for the longest possible time at least a natural gas supply to their consumers?

Mr. Hoffheimer: That is objected to as leading, as an improper method of examination, as a not proper redirect examination,
1570 and as incompetent, irrelevant and immaterial.

The Commissioner: Note the objection and let the witness answer.

A. Our company and all companies within my knowledge are constantly exercising effort to discover not only new sources of supply but additional gas within known fields. In a number of instances wells have been drilled to the deeper sands; that is, to sands underlying the known horizon. I know that some of the older and more experienced men entertain the belief that eventually there will be some additional gas found in deeper sands. So far within my knowledge there has been nothing discovered as yet that would give that any more effect than that of a "hope."

This much is true, that should a new sand, a deeper sand be discovered, the cost of production will be much greater, and the amount of available gas per well will be less than the wells we are getting now.

Mr. Hoffheimer: I move to strike out the testimony as to the witness and the company's hopes as manifestly improper.

The Commissioner: Note the motion.

1571 Recross-examination.

Mr. Blue:

Q. On your redirect examination, you referred to legislation by the legislature of the State of Ohio at the 1919 session, which left the matter of withdrawal in the hands of the Public Utilities Commission of the State of Ohio; when you referred to such legislation did you have in mind what is known as the Miller Act?

A. Yes, sir.

Q. And particularly to sections 504-2 and 504—section 3 of that act?

A. I could not identify the sections, Mr. Blue, but I refer to the act in its entirety.

Q. But anyway the act that you had in mind is known as the Miller act, and an act passed April the fifteenth, 1919, approved May sixteenth, 1919?

A. I couldn't identify the dates; I have not examined it as a lawyer. I refer to the Miller Bill, that is the Miller act, under which the Commission is assuming jurisdiction; the only legislation that I know of on the subject.

Q. Passed at the session of 1919 of the Ohio Legislature?

A. Yes, sir.

Q. On your redirect examination you referred to some acreage and some property in the State of West Virginia; where was

1572 this acreage and what was the amount of it, and in whose name was it acquired?

A. Originally acquired in the name of Treat & Crawford, The Ohio Fuel Supply Company not at that time being authorized to do business in the State of West Virginia. As to the extent of the acreage, I can not now give you the figures, without going back and examining old records. The general locations are in Roan county, and in that vicinity. It is now—what is still retained—is owned and under the control of the United Fuel Gas Company.

Q. To whom did Treat & Crawford transfer its acreage?

A. The money was advanced originally by The Ohio Fuel Supply Company——

Q. I say to whom did Treat & Crawford transfer the acreage?

A. Was transferred to the United Fuel Gas Company.

Q. The United Fuel Gas Company is a corporation under the laws of the State of West Virginia?

A. I believe so.

Q. And operates in that state?

A. Yes, sir.

Q. That is the same company whereof Mr. Harry Wallace, a witness who has testified in this case, is at this time general manager?

1573 A. Yes, sir.

Q. As we understand your redirect examination, the shortage of twenty-five per cent you referred to on cross-examination and about which you were inquired on redirect examination, relates only so far as you give that percentage to your domestic consumers?

A. Yes.

Q. And in making your calculations you were making it upon the basis of your domestic consumers eliminating the industrial consumers?

A. Yes.

Q. Is that right?

A. Yes.

Q. What would be your shortage if you were to include all of your consumers, all the different classes of your consumers; what would you say then your shortage would be?

A. I don't know.

Q. Well, stating it in percentages and for the same periods you had in mind when you gave the percentage statement of twenty-five per cent, what would you say?

A. I couldn't attempt to answer that, Senator, because I would first have to procure from the records the volume of gas sold for industrial, from time to time, and work out a calculation from it, which I haven't before me now, not having the figures.

1574 Q. Well, it will be considerably larger than your twenty-five per cent?

A. Undoubtedly, that is assuming it in the sense that you could sell that much more gas, if you had it, be undoubtedly much larger.

Q. On the days when you had these shortages of twenty-five per

cent you were furnishing no gas for industrial purposes, or practically no gas for industrial purposes?

A. I don't recall, Senator, that I attempted to give a percentage as to the amount of shortage last winter. My forecast, for what it was worth, was directed only to the future, for this coming winter.

Q. Well, for whatever time that you had in mind, you were making that shortage upon the basis of your industrial gas turned off, or practically so, and still having that percentage of shortage for your domestic consumers?

A. Yes, sir, that is true.

Q. I neglected to ask you on your cross-examination whether or not the gas you bring through the line connecting with the United Fuel Gas Company and running to Sugar Grove—whether the gas that passes through that line at Sugar Grove becomes commingled with the gas you produce in the State of Ohio?

1575 A. May I ask you to read that question again.

(Previous question repeated.)

A. It becomes commingled with the gas which is produced in Sugar Grove and Jackson and Vinton district, at that point, yes, sir.

Q. Your company is furnishing at this time gas to industrial consumers in the State of Ohio?

A. Yes, sir.

An adjournment was here taken until Thursday, July 22, 1920, at 10:00 o'clock A. M.

ORIGINAL, #20 & #21.

October Term, 1920.

1576 THE COMMONWEALTH OF PENNSYLVANIA

vs.

THE STATE OF WEST VIRGINIA.

THE STATE OF OHIO

vs.

THE STATE OF WEST VIRGINIA.

Proceedings of Thursday, July 22, 1920.

And now the hour of 10:00 o'clock A. M. having arrived, hearing resumed pursuant to adjournment.

The Commissioner: Counsel for the Commonwealth of Pennsylvania and the State of Ohio give notice that upon the adjournment of the hearing as of today's date the hearing will stand adjourned until 10:00 o'clock on the morning of September 13, 1920, at which time the hearing will be resumed in the office of The Peoples Natural Gas Company, Pittsburgh, Pennsylvania, where the former hearings were held. Counsel for West Virginia waive all other or further notice of this hearing.

1577 J. W. MCMAHON, a witness produced on behalf of complainants, having been duly sworn, testified as follows:

Direct examination.

Mr. Eagleson:

Q. Please state your full name and residence, Mr. McMahon.
A. James W. McMahon, Toledo, Ohio.
Q. What natural gas company, if any, are you identified with, Mr. McMahon?
A. The Northwestern Ohio Natural Gas Company.
Q. And how long have you been associated with the natural gas business?
A. With the Northwestern, 18 years.
Q. Now go back through said 18 years, and as far back of that as your experience has gone, and give briefly your positions and the

nature of your employment in the natural gas industry up to the present time.

A. Seven years with The Buckeye Pipe Line Company.

Q. Beginning when?

A. Beginning in 1895.

Q. And the nature of your work there?

A. I was fuel agent for providing fuel for about 100 compressing or pumping stations that they had for pumping oil, and it became necessary for me to drill gas wells or have them drilled, construct pipe lines, purchase gas from independent producers, and
1578 have it conveyed to the stations for the purpose of using it as fuel.

Q. Where was this?

A. In Ohio and Indiana.

Q. And after that where did you go and what did you do?

A. After that I went to Toledo.

Q. In what year?

A. In the year 1902.

Q. And since 1902 what have been the various positions which you have held and the nature of your work?

A. Since 1902 I have been manager of the Northwestern Ohio Natural Gas Company.

Q. And located where?

A. At Toledo.

Q. Now putting it short, has your experience in the oil and gas business since 1895 carried you into close touch and a part of the various departments of the work, and brought you into touch and familiarity with the production, transportation and distribution of natural gas?

A. Yes, sir; it has.

Q. I call your attention to Ohio Exhibit No. 2 and ask you if on that exhibit there is evidence of the pipe lines and pump stations, if any, of the Northwestern Ohio Natural Gas Company?

A. Yes, sir.

Mr. Eagleson: In lieu of offering an additional exhibit the
1579 witness will be examined from Ohio Exhibit No. 2, which represents also the lines of his company.

Q. After examining Ohio Exhibit No. 2, Mr. McMahon, can you state the fact, if it is a fact, that there is evidence there of the main transportation lines and pump stations, if any, of the Northwestern Ohio Natural Gas Company.

A. Yes, sir.

Mr. Eagleson: We desire this Exhibit to be considered in evidence as applying to this witness and the company of this witness the same as it did to The Ohio Fuel Supply Company.

Mr. Blue: There is no objection to that.

Q. Now, Mr. McMahon, I wish you would take Exhibit No. 2 and state, perhaps beginning at the south end of the system, and de-

scribe the physical property of your company as evidenced by said exhibit.

A. At the southern end of the line where it is marked Horns Mills,—it is just below that,—there is a compressing station where we get our gas, compress it and move it through two ten-inch lines; we pass it through two ten-inch lines, passing through the counties of Fairfield, Licking, Delaware, Marion, Wyandotte and Hancock counties to a point about 121 or 122 miles north of our compressing station known as Wheeler's station.

1580 Q. In what county is Wheeler's Station situated?

A. Fairfield.

Q. In Ohio?

A. Yes, sir.

Q. And the point to which those two lines extend is in what county?

A. It is in Hancock County.

Q. And about what direction and distance from Toledo?

A. It is about 38 miles southwest, or nearly south from Toledo, The Tonkin Compressing Station is, and the line then runs southeast.

Q. Now can you just go on and in your own way describe completely those lines as shown on the map.

A. From the compressing station known and marked as Tonkin Station on Exhibit No. 2 we have a 12-inch line and a 10-inch line running to the city limits of Toledo, one on each side of the City, the 12-inch upon the west and the ten-inch upon the east side of the City of Toledo. At that point the gas is reduced and put through our city lines for consumption by the costumers of The Northwestern Ohio Natural Gas Company. In between Toledo and Tonkin Station we have the village of North Baltimore, the City of Bowling Green, the village of Perrysburg and the village of Maumee, which are also supplied from these main trunk lines.

1581 Q. In addition to the City of Toledo, Lucas County, Ohio?

A. Yes, sir.

Q. Then you supply natural gas to those five municipalities just named by you?

A. We do.

Q. Does the Northwestern Company supply gas to any other municipalities?

A. No, sir.

Q. Or consumers?

A. No, sir.

Q. What is the present source of your natural gas supply?

A. We get our present natural gas supply entirely through the lines at Wheeler Station in Fairfield County.

Q. And from whom, Mr. McMahon?

A. From The Hope Natural Gas Company, nearly entirely.

Q. Well, what additional gas do you procure and how regularly and to what extent?

A. We procure some gas from The Ohio Fuel Supply Company in emergency cases where The Hope Natural Gas Company cannot or

does not give us sufficient gas and there is danger of our fires going out in Toledo and the towns we supply.

Q. How long have you been so procuring your natural gas supply?

A. About sixteen or seventeen years.

Q. Now prior to that time did you distribute natural gas to
1582 consumers up in Northwestern Ohio to these municipalities which you have named?

A. Yes, sir.

Q. Give us a little history of that service as to the time and character, the companies, if more than one, and so forth.

A. The company has been doing business in Northwestern Ohio since about 1887. At that time——

Q. Tell its starting history.

A. At that time they produced the gas from northwestern Ohio. They acquired thousands of acres of land in fee and by lease throughout the counties of Wood, Hancock, Seneca and the northwestern counties of Ohio. They drilled thousands of wells and piped the cities and supplied natural gas to the consumers. About 1900, 12 years after they began exploiting for gas, the gas supply of northwestern Ohio was becoming exhausted. The gas was found in the Trenton rock field only in northwestern Ohio and the oil was also found in that same formation, and in drilling for oil, which was the most valuable commodity at that time, they drilled so many thousands of wells that the gas was permitted to escape and did escape into the air. It created a back pressure upon the oil wells and they let it out. Efforts were made at that time by the passage of laws by the legislature of this State to prohibit the wastage
1583 of gas, but those efforts did not seem to prolong the life of the gas field a great deal, and it began to become exhausted very rapidly. At that time the City of Toledo was engaged in the natural gas business as a municipality. They bonded themselves I think for $1,500,000.00, which bonds are still outstanding and not paid, and went into the natural gas business. I believe the city of Fremont did the same, as well as Findlay,—the northwestern cities. But almost before the City of Toledo got to producing gas the field from which they expected to draw was about exhausted, and they went out of business; sold their lines practically for junk, I believe, and discontinued. The Northwestern Ohio Natural Gas Company then had two lines, one a ten-inch line and one a twelve-inch line running from the City of Toledo south to the then known gas fields of Ohio.

Q. In the counties which you have already named?

A. Yes, sir. They were confronted with a possibility of losing their entire investment, or getting gas elsewhere. They then entered into a contract with The Hope Natural Gas Company, whereby they were to lay a line or lines south from Tonkin Station, which was 38 miles from Toledo, to a point known as Sugar Grove, in Fairfield County, Ohio, where they were to connect with or receive gas from The Hope Natural Gas Company, which company, in turn, was to procure that gas from West Virginia.

1584 Q. Sugar Grove is the village in Fairfield County at which is located Wheeler's Station?

A. Yes, sir.

Q. All right; go ahead.

A. Meanwhile The Northwestern made all efforts to provide or find new fields. They were still getting, of couse, some gas from their leases south of Toledo.

Q. When did you lay your second line from Tonkin Station south to Wheeler Station?

A. In 1908.

Q. And are those two lines so laid from Tonkin Station to Wheeler Station still in existence and service?

A. Yes, sir.

Q. And are used for what?

A. Used for the purpose of transporting gas from Wheeler Station north of the city of Toledo and the other municipalities which we supply with natural gas.

Q. What is the fact at the present time as to the companies being able to procure any gas from the fields you have referred to in northwestern Ohio?

A. We have but six or seven wells in the Ohio fields.

Q. What has become of the others?

A. They have been abandoned and plugged. The six or seven wells referred to are not connected to our main line—are not supplying any gas to our main line owing to the fact that the pressure is not sufficient so that we could get the gas into our main lines.

1585 We simply sell that gas to the farmers or give it to them for the use of their right of way possibly. We leased in 1895 7,000 acres of land in Lorain and Huron counties and drilled two wells which proved worthless. In 1898 there were leased about 3,000 acres of land in Hocking and Fairfield Counties which proved worthless upon drilling. In 1902 and 1903 there was leased 20,000 acres of land in Vinton County and three wells were drilled which proved worthless. In 1905 22,000 acres of land were leased in Ashland, Richland, Medina, Holmes, Wayne, and Knox counties, Ohio, upon which three wells were drilled which proved worthless. We now have about 4,000 acres of land 15 miles north of Toledo in the state of Michigan which is wild-cat territory, but which we expect to test.

Q. To what extent, if any, has your company been, in the past, endeavoring at all times, where possible, to procure additional gas supply?

A. Well, we are making every effort, every time a well is being drilled any place where we think there is a possibility of gas, we immediately take up leases and place ourselves in a position to drill and go ahead with production if any gas is found.

Q. Then is it a fact, or not, that it is a part of your business, in addition to your own personal investigations over the country, to observe conditions within any possible distance of the lines of

1586 your company to ascertain the presence of and procure natural gas?

A. Yes, sir.

Q. How many consumers of natural gas have you, at the present time, Mr. McMahon, on your system, giving the number in each municipality if you can.

A. In the village of North Baltimore we have at present 663 customers; in Bowling Green 1,639; in the village of Maumee 489; in the village of Perrysburg 595, and in the City of Toledo 52,132.

Q. What is the population that that carries as being dependent upon your company for natural gas?

A. Something more than 250,000 population.

Q. Now, Mr. McMahon, can you give us the amounts of natural gas which your company has been able to deliver to those consumers each year back to 1910, giving the classifications; that is to say, the amount delivered for domestic consumption and the amount delivered and consumed in industrial enterprises?

A. Yes, sir; in 1910, 3,103,695,000.

Mr. Blue: That is what; domestic?

Witness: No; that is the total.

Q. Can you give the domestic and then the industrial and then follow that with the total each year through?

A. In 1910 the total domestic was 2,999,900,000 cubic feet; industrial 103,786,000 cubic feet; total 3,103,695,000 cubic feet.

1587 1911, total domestic 3,747,542,000 cubic feet; total industrial 175,995,000 cubic feet; total 3,923,537,000 cubic feet.

1912, total domestic 3,867,865,000 cubic feet; total industrial 268,066,000 cubic feet; total 4,135,931,000 cubic feet.

1913, total domestic 4,046,478,000 cubic feet; total industrial 367,307,000 cubic feet; total 4,413,785,000 cubic feet.

1914, total domestic 4,092,963,000 cubic feet; total industrial 661,803,000 cubic feet; total 4.754,766,000 cubic feet.

1915, total domestic 4,593,595,000 cubic feet; total industrial 527,057,000 cubic feet; total 5,120,652,000 cubic feet.

1916, total domestic 5,239,111,000 cubic feet; total industrial 485,682,000 cubic feet; total 5,724,793,000 cubic feet.

1917, total domestic 5,775,785,000 cubic feet; total industrial 630,460,000 cubic feet; total, 6,406,245,000 cubic feet.

1918, total domestic 5,205,406,000 cubic feet; total industrial 515,026,000 cubic feet; total 5,720,433,000 cubic feet.

1919, total domestic 5,689,621,000 cubic feet; total industrial 313,948,000 cubic feet; total 6,003,569,000 cubic feet.

1588 Q. Mr. McMahon, have you got or can you give us, at least approximately, the percentage of the total delivery that went to domestic and to industrial consumers during say the last three or four years?

Mr. Blue: Suppose you begin with 1914.

The Witness: The last year——

Q. Well, run back from 1919 back as far as you can, or at least back to say 1914.

A. Well, I haven't got it in percentages. You can get that from the figures though very easily.

Q. I thought you had it.

A. The only thing I notice in the percentage is that the last year it drops down to about four or five per cent.

Q. And in 1918, what would it be?

A. In 1918 I should think it would be about ten per cent.

Q. And 1917?

A. 1917 it would be about ten or eleven per cent.

Q. And 1916?

A. About a little less than ten per cent.

Q. And 1915?

A. About ten per cent; a little over,—a little over ten per cent back there. I figure it was about 12 per cent in 1914, about 11 per cent in 1915, about 9 per cent in 1916, about 11 per cent in 1917, ten per cent in 1918, and about six per cent in 1919.

Q. Why is there an apparent falling off in percentage for industrial purposes in 1919?

1589 A. Well the war was over and we lost the Spencer Engineering Company and two or three industries that were manufacturing ammunition that we supplied. They went out of business. The Libby Sheet Glass Company that used some gas moved from Toledo to West Virginia. The Owens Bottle Machine Company, which used some gas, what we could give them maybe in the summer,—some little gas in the summer, they moved to West Virginia.

Q. Did you furnish any gas during the war period by order of the government for industrial purposes?

A. Yes, sir.

Q. State briefly the nature and extent of that.

A. The Toledo Bridge Company and The Spencer Engineering Company got an order from the government for us to furnish them gas I believe; I will not say The Toledo Bridge Company did; I don't think they got an order but The Spencer Engineering Company started and got an order.

Q. During what part of the year do you furnish gas for industrial purposes on your system?

A. During the summer only,—during the summer months only.

Q. Have you any fixed period of time in the fall when the industries are cut off, or do you let weather conditions govern that?

A. Well, industrial consumers cannot be supplied on our lines, excepting during the summer. It is a physical impossibility because of the fact that our pressure goes so low when it gets at all cold

1590 that they could not run. But we have a general rule that all industrial consumers go off November 1st anyhow. But they would go off physically; they could not get any gas from our pressure.

Q. Is that in order that you might conserve your supply for exclusively domestic consumption?

A. Absolutely.

Q. Then as I understand you the gas which your company distributes is purchased in the entire amount by you as you have stated?

A. Yes, sir.

Q. And procured through the Wheeler Pump Station at Sugar Grove from The Hope Natural Gas Company?

A. It is measured there and compressed and pushed north.

Q. To what extent Mr. McMahon,—give such detail as you may be able to give with reference to your furnishing gas to the municipalities, for municipal purposes; public buildings, churches, school houses and so forth?

A. We furnish gas for cooking and hot water, and we did furnish gas for heating to the State Insane Asylum at Toledo until about six years ago when we were obliged to discontinue it. But we now furnish gas for hot water and cooking for the State Insane Asylum in Toledo which has a total of inmates and attendants of between 1,500 and 2,000 people. The Northwestern Company supplies gas to the post office in Bowling Green, to the sub-stations in To-
1591 ledo, all of the hospitals, orphan asylums, houses for the aged and the charitable institutions of Toledo, and the small towns are supplied with natural gas by our company for cooking and hot water; nearly all the school houses in the municipalities and in the City of Toledo are supplied with gas for cooking, and some of the smaller ones for heating. All of the parochial residences, and that applies to the churches where they have cooking utensils, with the exception of six or seven outlying churches that are beyond our lines, are supplied with natural gas. The libraries, to a greater or less degree, are supplied with natural gas; the waterworks for operating their filtration plant in the City of Toledo, and their high pressure stations for fire protection are supplied with gas, and all but one or two of the fire department houses. The entire economic condition, so far as fuel,—cooking is concerned of the city of 243,000 population,—and that applies equally to Bowling Green, North Baltimore, Perrysburg and Maumee, depends upon our supplying natural gas to those consumers.

Q. Have you in mind the population of Bowling Green, Wood County, Ohio?

A. About 8,000 I think; I know it is a city.

Q. Now to what extent, if you know Mr. McMahon, have the consumers to which you have referred constructed their houses
1592 and facilities for the consumption of natural gas, and are dependent upon natural gas and have constructed their facilities for that purpose?

A. Owing to the fact that the artificial gas plant in Toledo has a capacity for supplying only seven or eight thousand people, the city of Toledo has grown up and depended upon natural gas. It was cheaper, healthier, and more economical, and the natural gas company extended its lines as the city grew and the people built their houses and purchased gas burning appliances with that as a fundamental principle of fuel for cooking, and in many instances for heating. The houses were not constructed, in a great majority of cases, except very large houses, they were not constructed with high chimneys to give them a good draft to burn coal. They were constructed to burn gas where they used it in a small heating way at least, and entirely for cooking and hot water for baths.

That, of course, was equally true of the municipalities outside; they had only natural gas there.

Q. And is it a fact that your companies' lines extending southward from Tonkin Compressing Station to the Wheeler Compressing station, a distance of a 160 miles, and being two in number, were designed, constructed and have been operated ex-
1593 clusively for the purpose of conveying natural gas to the consumers of the company whom you have described?

A. Yes, sir.

Q. Do you know what it cost to lay those two main transportation lines you have just referred to?

A. I could not tell you.

Q. Mr. McMahon, if, pursuant to the provisions of the legislative act, the validity of which is in question in this proceeding, the authority of West Virginia would cause to be diverted to domestic, industrial and other uses in West Virginia, and for the public and any part of the public in West Virginia, to meet all the demands that may be made in reason upon The Hope Company in West Virginia, for whatever purposes it may be desired, and thereby make it impossible for The Hope Company to deliver to your company at Wheeler Station, as you have described, the amount of gas it has been and is delivering to you pursuant to the contract referred to, in whole or in considerable part, what would be the effect upon the ability of your company to continue to serve its consumers.

Mr. Hoffheimer: Kindly read that question.

(Question read.)

Mr. Hoffheimer: The question is objected to as calling for an opinion or conclusion of the witness for which no proper foundation has been laid, and the answer to which, as called for,
1594 will be speculative, and because the question assumes conditions not proved; that it involves an improper construction of the Act of the legislature in question, and the evidence is incompetent, irrelevant and immaterial.

The Commissioner: Note the objection and let the witness proceed.

A. In answer to that question I wish to say that during the past several years,—four or five years at least—owing to the growth of the City of Toledo and the municipalities and the number of consumers that we have at present on our line, we have invariably been short of gas during the winter months and at some period of nearly every day in the winter months. That has become so marked that during the past two years we have made no extensions, notwithstanding the growth of the community we serve, for the purpose of taking on new consumers. The list of consumers we have has increased because of the fact that residences have been built along the lines that are already laid, but we have made no extensions for the purpose of taking on new consumers, owing to the fact that we could not get a sufficient supply of gas to serve

the greater quantity during the winter months. If The Northwestern was to be deprived, through the legislative acts of another state, or if The Hope Company were only able to deliver us
1595 a smaller quantity or a less quantity of gas than they are at present delivering us, it would cause us great hardship in the communities we serve. If that was very extensive it would cause, during the winter months, almost a total cessation of the supply of gas to our consumers, and would cause irreparable damage to the people that we serve, and would be detrimental to their health and dangerous to their property.

Q. Is it necessary, Mr. McMahon, in the service of gas,—is it necessary to a dependable or worth-while service of natural gas to a consumer that the flow from the source of supply to the company be uninterrupted and continuous?

A. Oh, yes.

Q. Rather than to be arbitrarily shut off or diverted, making the supply intermittent and undependable as to continuity?

A. It is necessary for the continuous flow of the gas.

Q. Now you have spoken as to the result of the Act in question on your consumers; what would be the effect of the Act referred to on your company?

A. The company would be financially ruined.

Mr. Hoffheimer: I move to strike out that answer as an opinion or conclusion of the witness. If the evidence is competent, let us have the facts and not an opinion.

1596 The Commissioner: Note the motion and proceed.

Q. What value would your property have, if any, under those circumstances?

A. Junk value only.

Q. Would it be worth-while, from an economic or practical standpoint to lift, for the purpose of obtaining salvage value therefrom, your main transportation lines from the Wheeler Compressing Station through to Toledo?

Mr. Hoffheimer: Note the same objection.

The Commissioner: Let the objection be noted on the record and the witness may answer the question.

A. I could only give an opinion upon that. It depends very largely upon the cost of labor, the amount of damage you would do to the farms in lifting your pipe and taking it up and the amount you could get for the pipe after it was raised. I would say that I believe it would be questionable whether it would be worth lifting or not.

Q. What have you to say as to the nature of the country and its topography through which those lines extend?

A. They extend through a beautiful farming country where the damage is lifting the lines and throwing up the soil and getting it back in would be very great. It would not pay to take the city lines up at all.

Q. What is the fact as to the streets in Toledo, Bowling Green and perhaps the other cities and towns being paved?

1597 A. Yes, sir.

Q. Over the lines of your company?

A. Yes, sir, they are paved in nearly all instances, of course.

Q. What is the capital stock of your company?

A. $2,750,000,—and some odd dollars.

Q. Can you give us the amount of money that has been invested as capital account in the construction, extending and building up of your property to its present state?

A. Between six and a half and seven million dollars.

Q. And in use, as it now is, would you say that its present value would be greater or less than that amount.

A. Greater.

Q. You spoke of having a station of compressors at or near North Baltimore; describe that,—called I think the Tonkin station.

A. What do you mean by describing it?

Q. Well, what is it?

A. It is a compressing station for taking the gas when the pressure drops—after it leaves Wheeler Station the pressure, owing to friction becomes lessened as it comes a certain distance and it is taken and recompressed again.

Q. It has an intake to the south that discharges the gas through its valves to the north?

A. Yes, sir.

1598 Q. Thereby increasing the pressure and facilitating the flow?

A. Yes, sir; that is right.

Cross-examination.

Mr. Hoffheimer.

Q. I understand you to say that the dependence of your company is almost wholly on the supply of West Virginia gas by The Hope Natural Gas Company?

A. Yes, sir.

Q. Why, if you are experiencing the shortage you have described, do you not go to the State of Indiana for natural gas supply?

A. I do not know why we don't.

Q. Is there any reason why you should not?

A. Well, Indiana, I believe, has been already exploited for gas and the known gas fields of Indiana, I think, have become exhausted.

Q. And the experience in Indiana has been the same as that of Ohio?

A. I think so, yes, sir.

Q. Or the northwestern part of Ohio as you indicate?

A. Yes, sir.

Q. When did you say you drilled those wells in Indiana which you mentioned?

A. I did not say I drilled any wells in Indiana.

1599 Q. Were you not interested in the drilling of some wells in Indiana?

A. No, sir.

Q. Perhaps I misunderstood you. Did you have any experience in Indiana at all?

A. Not to any great extent, no.

Q. In what respect?

A. I say not to any great extent.

Q. Well, to what extent?

A. Excepting as I passed through the state and was interested in some fuel stations there and supplied them with coal and I saw the field—the oil field and the gas field during its prosperity, and watched the decline of it.

Q. In what year did you begin to take gas at Sugar Grove from The Hope Natural Gas Company?

A. 1903 I think or 1904; along about that period.

Q. Was that done under contract with The Hope Natural Gas Company?

A. I believe so.

Q. A written contract?

A. I think so.

Q. There has been offered in evidence during the hearings of this case at Pittsburgh, that agreement between The Hope Natural Gas Company and The Northwestern Ohio Natural Gas Company, dated October 16, 1915, Pennsylvania Exhibit No. 16; then there

1600 must have been an earlier written agreement?

A. Yes, sir.

Q. I assume that earlier agreement was substantially the same as the 1915 agreement was it not?

A. Well, I could not answer that; I don't know; but I know that we had a contract prior to the 1915 contract.

Q. Did you ever see that earlier contract?

A. Well, I could not just answer that, as to whether I have ever seen it or not.

Q. Anyway, the October, 1915, contract, already introduced in evidence, is the one under which you are now taking gas?

A. Yes, sir.

Q. How was it that in 1903 or earlier, when your northwestern Ohio field became exhausted, you did not go to other parts of Ohio to obtain a gas supply.

A. There was not any gas supply in sight elsewhere that we could see.

Q. In other words, the only feasible project was to go into West Virginia?

A. Well, I believe they did go into Canada even looking for gas.

Q. That was not very successful?

A. No. They took up a lot of leases I know up in Canada. They were as a matter of fact, looking in every direction for gas be-

1601 cause their existence as a company depended upon their getting it.

Q. Well, in 1903, when your company made the arrangement with The Hope Natural Gas Company, did you have in mind that the supply of West Virginia Gas would last forever?

A. Well, I don't know what I did have in mind at that time. The question was to get gas.

Q. Well, from your knowledge and experience with the gas business, could you or any man in the natural gas business have had the idea that the West Virginia Gas supply was inexhaustible?

A. Well, it was a new field. We did not know. The natural gas fields of the past had proven themselves not inexhaustible. Whether West Virginia would be different or not we did not know. It was a new territory to us.

Q. Well you knew Ohio had become exhausted or was in the course of exhaustion?

A. Yes, sir.

Q. You knew that Pennsylvania was in the course of exhaustion?

A. Yes, sir.

Q. And that the depletion had already manifested itself?

A. Yes, sir.

Q. You knew, in a general way, that Indiana was becoming exhausted or had become exhausted?

A. That is right, yes, sir.

1602 Q. You knew nothing to indicate that the character or source of gas supply or its method of production in West Virginia was any different than in those three states did you?

A. No, sir; not a bit.

Q. The only difference was that West Virginia was a newer gas field and that, therefore, the time of ultimate depletion and exhaustion was further removed; wasn't that the situation?

A. Well, that would be a conclusion that any gas man would draw from his knowledge of the past.

Q. That was the conclusion which would have been drawn in 1903 as well as in 1920?

A. Yes, sir.

Q. Now, my understanding of your answer to Mr. Eagleson's question as to the operation or effect of this West Virginia statute with which we are dealing is this, that if any appreciably larger quantity of gas now produced or transported by The Hope Natural Gas Company in addition to what is now being taken in West Virginia, is retained for West Virginia consumption, it will be detrimental to The Northwestern Ohio Natural Gas Company and its consumers; is that your statement?

A. Read the question please.

(Question read.)

1603 A. My statement is that if, owing to the enactment of laws by the state of West Virginia, whereby The Hope Natural Gas Company cannot deliver us the amount of gas, or a lesser amount of gas than they are now delivering us, that it will be detrimental.

Q. Suppose we leave out of consideration the existence of any West Virginia statute, you undertake to convey the impression, regardless

of any statute, that if The Hope Natural Gas Company delivers to The Northwestern Company a less quantity of gas than it is now giving to The Northwestern Company, The Northwestern Company and its consumers will be seriously affected?

A. Yes, sir.

Q. In other words, you mean to say that for every thousand feet of gas of additional consumption in West Virginia there will be a corresponding amount taken away for Ohio consumption?

A. I do not mean to say that. I do not know what you will do down there, and I do not know what conditions may exist down there. I am simply stating the facts as I know them.

Q. Well, isn't that the logical consequence of what you say, that for every thousand feet of gas of additional consumption in West Virginia there will be that much less to be delivered to The Northwestern and other Ohio Companies?

1604 A. I don't know. I don't want to draw any conclusions.

Q. What do you say about it?

A. I say if any less gas than is at present delivered to us by The Hope Natural Gas Company is delivered to us, that it will be very detrimental.

Q. Well, if The Hope Natural Gas Company has to deliver 1,000 feet more of natural gas in West Virginia than it is now delivering, it will have 1,000 feet less to deliver to The Northwestern and other Ohio companies, won't it?

A. I don't know.

Q. Suppose you make it 100,000 feet instead of 1,000 feet.

A. I would not be justified in drawing any conclusions.

Q. Suppose you make it a million feet instead of one thousand feet.

A. I draw no conclusions on The Hope Company. I simply state the facts as they affect our own company.

Q. What you mean to say then is that if The Hope Natural Gas Company does not deliver to The Northwestern Ohio Natural Gas Company as much gas as it is now delivering, the shortage to The Northwestern Ohio Natural Gas Company and its consumers will continue or be increased?

A. Yes, sir.

Q. And that, regardless of the cause of non-delivery?

A. Absolutely.

Q. Then you did not mean to give the Commissioner or the Court the impression that the effect of this statute was to cause or

1605 would be to cause The Hope Natural Gas Company to deliver you less gas, did you?

A. Excepting as it impressed my mind in reading the Act.

Q. Oh, then your answer was based upon what you regard as a construction of this statute?

A. If it was put into effect, the natural consequence would be that the companies getting gas from West Virginia would get much less and I thought that would naturally affect our company.

Q. Well, did you figure out in your own mind how much gas was

going to be retained in West Virginia under the operation of that Act so as to cause prejudice or a shortage to The Northwestern?

A. I did not.

Q. You would not give it in thousands or millions or billions?

A. No, sir.

Q. You don't know anything about it?

A. No, sir.

Q. Well, how much would your company lose under that construction of that statute as you have read it; how much would be your shortage, or how much of a deficit would there be in The Hope Natural Gas Company's deliveries under your construction of that statute?

A. I could not tell you that.

Q. Have you any idea?

1606 A. I haven't any idea.

Q. Have you ever received any information from any source that the supply of West Virginia gas was decreasing?

A. Well, I have heard it mentioned by gas men that it was decreasing.

Q. That is an accepted fact, isn't it?

A. I think it,—by the gas men.

Q. And it is an accepted fact that that decrease of West Virginia production is apt to continue?

A. That would be the natural conclusion, that when it starts to decrease it continues unless they find new fields.

Q. Do you know of any new fields in West Virginia?

A. No, sir, and unless they would find new fields I would expect the fields to decline.

Q. That is the shortage of West Virginia production would become greater and greater?

A. Yes, sir.

Q. Aside from the existence or operation of this statute have you had, or do you now have in your mind, any idea that the increasing shortage in West Virginia will interfere in any respect with the ability of The Hope Company to deliver gas to The Northwestern Company?

A. Well, I understand that The Hope Company have sufficient territory to give us a fair supply of gas in accordance with their

1607 contract if the gas can be delivered in accordance with their contract, but if diverted by law or in any other way, that it would interfere with their ability to furnish us.

Q. That is, your assumption is and has been that if The Hope Natural Gas Company's own volume of gas has remained and will remain constant?

A. Well, subject to the decline, I suppose, of the gas field.

Q. Well, you know or assume that the gas fields have been declining and are declining?

A. I assume so.

Q. And suppose you take into consideration the fact that they are declining and have declined, then I want to ask you the question whether you have considered or do consider that that decline does

or will interfere with the ability of The Hope Natural Gas Company to deliver gas to the Northwestern?

A. Well, I would be unable to answer that question. That would be an assumption.

Q. Well, if they have less gas they cannot deliver you as much, can they?

A. I should imagine if they deliver to us as much gas they would have to take it away from somebody else, maybe.

Q. Now suppose we wipe this West Virginia statute off of the books and assume it to be a fact that there will be a further decline of the West Virginia gas fields as a natural manifestation, where
1608 is The Northwestern Ohio Natural Gas Company going to get its supply of gas to make up the deficit?

A. We would expect The Hope Natural Gas Company to diligently pursue a policy that it assumes when making a contract with us to exploit for gas and find it if possible.

Q. The contract you are talking about is this contract of October 16, 1915?

A. Yes, sir.

Q. Let us assume a little bit further that The Hope Natural Gas Company has made an exploration and effort such as you indicate and still its supply of natural gas decreases, you would regard it as a necessary consequence that The Hope Natural Gas Company could not give you as much gas as formerly, would you not?

A. Well, that would be a question that really would be beyond my comprehension. You cannot tell what may happen.

Q. What do you think may happen?

A. I don't think.

Q. All right; suppose we leave out thought then and go to this proposition; assume that the amount of natural gas which The Hope Company does or is able to deliver to you materially decreases, and that this statute has been wiped off of the books, what is The Northwestern Ohio Natural Gas Company going to do in that con-
1609 tingency?

A. I am unable to answer.

Q. What can it do?

A. I am unable to answer what it will do or what it can do.

Q. How did it come about that within the last two years your company has declined to extend its lines?

A. Because of the fact that we had consumers enough during the winter months to take all of the gas that we could furnish them or that The Hope Company would furnish us.

Q. Were you able to give your present consumers an adequate supply?

A. No, sir.

Q. You had a shortage?

A. Yes, sir.

Q. Do you think that shortage is going to remain stationary or will it increase?

A. It will depend upon the weather to some extent; the severity

of the winter and the length of time that a cold period would last before it would break.

Q. Well you do expect to have winters in the future such as you had in the last two or three or four years, don't you?

A. Well, we hope not.

Q. Suppose your shortage does increase, whether The Hope Natural Gas Company violates its contract or whether it does not, what will be your next step as a gas operating proposition?

1610 A. Well, I think that we would have to meet that condition when it arises.

Q. When?

A. We would meet that condition as it arose. I would not want to say what my next step would be. It would be a very serious proposition,—a very serious proposition.

Q. Well, what ways of meeting it now occur to you?

A. No way of meeting it occurs to me now.

Q. One way of meeting it would be to do exactly what you have done in principle within the last two years, and that would be to cut down the area of your gas distribution, would it not?

A. If we were allowed to do that by law it would look to me as though finally that would be the thing to do.

Q. What law are you talking about?

A. The laws of the State of Ohio and the orders of the Utilities Commission of the State of Ohio.

Q. Are you talking about this Miller law that we mentioned here yesterday?

A. I am talking about the general Acts of the State of Ohio.

Q. Of the State of Ohio?

A. Yes, sir.

Q. Well, assuming that you are wrong about the construction of the Acts of Ohio and you cut off some of your consumers, what kind of fuel are they going to use; what are they going to do?

A. I am unable to say what they are going to do.

1611 Q. What did they do or what did their predecessors do before there was any natural gas in Toledo?

A. I take it for granted that their predecessors burned wood first and then coal.

Q. What are those people doing to whom you have been unable to extend your service within the last two years?

A. In some instances I think they are burning coal. Where possible in the City of Toledo, where there is the old artificial plant, I think they are connected with the artificial plant if they can be. It does not cover a very large area of the city, but where they can, they use artificial gas.

Q. I suppose a very considerable proportion of them burn electric lights, do they not, for illumination?

A. I think most of them do, probably.

Q. The fact is that a very large number of your own gas consumers within the radius of your service burn electric lights?

A. Oh, yes, sir.

Q. In considering the fact that you have cut your service down, as I understand it, to fuel for cooking and hot water heating,——

A. And light.

Q. To a large extent, how do those people heat their houses?

A. The smaller houses are using natural gas for heat in
1612 stoves. Those that have furnaces burn coal in the winter during the severe months and in many instances they have only gas furnaces where they can burn nothing but gas and those people have to depend and take their chance on what heat they can get.

Q. Well, I suppose the consumption of coal for heating has involved some change in appliances, has it not?

A. It has what?

(Question read.)

A. Yes, I should imagine so.

Q. What proportion of your consumers burn coal for heating?

A. For heating?

Q. Yes.

A. During a portion of the year—the winter months—I would assume that 40 per cent of our consumers use coal for heating.

Q. What did they burn before they went to coal?

A. Well, I think in the early days they probably used natural gas.

Q. What do you mean by "the early days"; how far back?

A. When they had gas in Ohio up close to Toledo.

Q. Have there been any changes from gas to coal for heating purposes within the last five years?

A. Yes, sir.

Q. To what extent?

A. Well in percentage I could not say.

Q. A very considerable proportion?

1613 A. A very considerable proportion experiencing the fact that they could not have gas for heat during the cold winter months have changed to coal. That applies largely to the furnaces only.

Q. If you are short on gas how does it happen that you are supplying gas for industrial purposes?

A. We are not during the winter when we are short on gas.

Q. Why do you do it during the rest of the year?

A. We don't do it to a very large extent any time during the year.

Q. Well, you do it to the extent which your figures of consumption indicate?

A. Yes, sir.

Q. The question is why you supply that gas for industrial purposes if you are short on domestic gas.

A. Well, that is supplied in the summer when we have a sufficient supply of gas and only in a very limited way. We now are not taking on any industrial consumers at all.

Q. That hardly answers the question. The question is why, if you are short on domestic gas, you are furnishing industrial gas to anybody.

A. Well, because when we are short on domestic gas we do not furnish industrial gas to anybody.

Q. Well, why don't you save the gas and hold it?

1614 A. Where would you save it?

Q. Well, the question is, why?

A. Well, I would want to know where.

Q. What you mean to say is that that is an impracticable proposition?

A. Yes, sir.

Q. Both from an operating standpoint and from a financial standpoint?

A. Yes, sir.

Q. The fact is that you have to have a certain amount of industrial consumption and sell a certain amount of industrial gas in order to help out your operating revenues and enable you to keep down the price of your domestic gas; is that right?

A. That is not true with us, no, sir. We are not obliged to have any industrial consumers in order to exist.

Q. Your situation is somewhat different then from the other gas companies?

A. I think so.

Q. How much shortage in the amount of gas supplied to you by The Hope Natural Gas Company—or putting it in another way, how much further diminution in the amount of gas supplied to you by The Hope Natural Gas Company would it take to render your service impracticable or place you in a position, where as I understood you to say, it would practically put you out of business?

1615 A. During the severe cold months of the year if we were to receive 2,000,000 feet of gas a day less than we are now receiving it would be a dangerous proposition for us to operate with the present number of consumers that we have.

Q. You are talking now about the coldest days of winter?

A. The winter months; every day is a cold day with us in the winter months.

Q. In other words, a further decline of 2,000,000 feet per day in delivery by The Hope Natural Gas Company to The Northwestern would so far interrupt your domestic service as to render it practically valueless to your domestic consumers?

A. I would not say valueless, no.

Q. Then what do you mean?

A. I would say it would make it, with the present number of domestic consumers we have, dangerous.

Q. Well, if it were dangerous would you be able to operate under those conditions?

A. Well, yes, we would up to a certain point; we would so long as we had sufficient gas to keep the fires lighted.

Q. Well, you have given us your 2,000,000 figure; how much diminution in the amount of gas delivered to your company by The Hope Company would it take to place your company in a situation which you described on direct examination as "financial ruin," and which, as you say, would reduce your property to junk value?

1616 A. Well, that would be problematical.

Q. Have you any idea?

A. No, I have not.

Q. Well, I am trying to find out just exactly what it is you are complaining about here, and how much shortage you are anticipating in order to get you down to that condition of financial ruin and junk value of your property; I want to know in millions or billions of feet how much that is going to be, is you can estimate it.

A. Well, we sell all the gas we can get, of course, from The Hope Natural Gas Company. At times during the winter months, our gas supply is inadequate for our domestic consumers. How much further that would have to go before thee fires would go out entirely would be a question.

Q. Would two billion feet do it per day?

A. Oh, we don't use two billion feet on the coldest day; we don't use but about 25,000,000 feet.

Q. You are talking about two billion feet a year are you?

A. Yes, sir; that is a year.

Q. Well, you say a substantial decrease would put you out of business; I want to know what figures you have in mind when you talk about a substantial decrease putting you out of business.

A. I would say a decrease of 25 per cent during the winter months.

1617 Q. During the coldest days in winter within your experience of the last two or three years, how much gas per day has The Hope Natural Gas Company delivered you?

A. About from 20,000,000 to 24,000,000 feet.

Q. When you talk about putting you out of business as a result of a decline of 25 per cent of Hope deliveries in winter, you have it in mind that you would have to spread the other 75 per cent over the area of your consumption?

A. Yes, sir.

Q. You mean the effect of a diminution of 25 per cent on the coldest days of winter would be to give no service of value to any of your consumers?

A. Well, I would not say that.

Q. What would you say about it?

A. I would say that when the cook stoves—probably 35,000 or 40,000 cook stoves were taken off at night that then they would get gas for heating and keeping their houses warm possibly during the night and keeping them warm during the next day. That would be contingent upon the fact, however, that we had sufficient gas to keep the fires lighted; that the gas would not go out entirely.

Here a recess was taken until 2:00 o'clock P. M.

1618 Thursday Afternoon, July 22, 1920.

And now, the hour of 2:00 o'clock P. M. having arrived, hearing resumed pursuant to recess.

J. W. McMAHON resumes the stand.

Cross-examination.

Mr. Hoffheimer:

Q. Are there any cities or towns in Ohio, to your knowledge, not supplied with natural gas?

A. Any cities not supplied?

Q. Yes, or towns.

A. Well, I think so.

Q. You had something to say about the supply of gas by your company to hospitals, schools, asylums and institutions of that kind; I assume that that gas is supplied under schedules filed with your Public Utilities Commissi[illegible] under similar circumstances to your supply of domestic gas?

A. Yes, sir.

Q. That is there is no more of a special contract with those institutions than there is with your domestic consumers?

A. With one exception.

Q. What is that?

A. The City of Toledo for their waterworks.

Q. How long has that contract been in existence?

A. About five or six years.

1619 Q. For what purposes is the gas consumed at the water works?

A. It is used in gas engines for the purpose of pumping the water from the filtration plant to the towers and for distribution.

Q. How long has that contract yet to run by its terms?

A. I think about a year and a half.

Q. That would carry you to about the end of 1921?

A. Yes, sir.

Q. Did I correctly understand you to say that your transportation lines were designed exclusively for natural gas?

A. Yes, sir.

Q. What about your distribution lines in Toledo and the other towns you mentioned?

A. Designed entirely for natural gas.

Q. What do you mean by saying that the lines were designed entirely for natural gas, in respect to your distribution lines particularly?

A. They were not laid to grade; they were smaller lines than are ordinarily used in artificial plants, and not laid below the frost line,—that is not necessarily laid below the frost line. Of course, some of them were laid below the frost line, but not necessarily so because natural gas does not freeze.

Q. To what extent they were or were not laid below the frost lines you would not undertake to say?

1620 A. No effort was made to lay them below the frost line.

Q. Aside from that feature and the size of the lines themselves, there would be no difference between the natural gas line and an artificial line would there?

A. Well, aside from that,—but that about covers all the objections that there might be.

Q. That is what I was trying to get at.

A. They would not be any good for artificial gas, of course.

Q. That is you used the same kind of pipe and couplings and all of that sort of thing?

A. Oh, yes, but not the same size, and they would have to be laid to grade for artificial gas and below the frost line.

Mr. Eagleson: And the drainage system?

Witness: Yes, the drainage system; the grade would carry that.

Q. I understood you to say that the capital stock of The Northwestern Ohio Natural Gas Company was $2,750,000.00 is that correct?

A. Yes, sir,—and some few hundred dollars, I think $250.00.

Q. That was an original cash investment?

A. Yes, sir, and more than that; I am not sure, but I think the original investment was more than that.

Q. What do you mean by saying that?

A. Because I noticed that they decreased the capital stock when the gas failed in northwestern Ohio, they decreased the capital

1621 stock somewhat, I think maybe $1,000,000.00.

Q. That is they wrote off some of their investment in order to meet the depreciation?

A. Yes, sir; I think so; that is true.

Q. Has any amount been written off since?

A. No, sir.

Q. I understand you to say that the investment in building up the property was six and a half million to seven million dollars?

A. Yes, sir.

Q. Where did that investment come from; of what did it consist?

A. Well, I should say it came from the earnings.

Q. That is surplus put back into the property?

A. Yes, sir.

Q. Is that six and a half million or seven million dollars all physical property or does it include some surplus or reserves of any kind?

A. It is all physical property; six million dollars of it at least is physical property.

Q. Well, how much surplus in addition do you carry?

A. Well, I could not just tell you that; not a very large surplus, if any.

Q. Can you approximate it?

A. Well, I would say less than a million dollars.

Q. That is earned surplus?

1622 A. Yes, sir.

Q. How about your depreciation reserves; to what extent do you carry them?

A. That I could not tell you; Mr. Denning would be able to tell you that better than I could.

Q. There is some such reserve?

A. Yes, sir; a very small reserve, however.

Mr. Hoffheimer: That is all Mr. McMahon.

Redirect examination.

Mr. Eagleson:

Q. The fact is, Mr. McMahon, there are many more than half of the municipalities, including villages in Ohio that have no natural gas at all?

A. I could not answer that.

Q. Well, you don't know the percentage of cities or municipalities in Ohio that have natural gas?

A. I do not.

Mr. Eagleson: That is all.

Mr. Blue: There are a number of cities and municipalities in Ohio that do not have natural gas?

Witness: Yes, sir.

Mr. Eagleson: About 80 per cent of them?

Witness: The northwestern part, Napoleon, Defiance, and all of those towns over there have no natural gas, in the northwestern part of Ohio.

1623 Mr. Eagleson: Well, there is not any natural gas in Ohio I believe except where there are the lines of these companies and some other local companies that carry gas to them?

The Commissioner: Mr. McMahon, you are now excused, and the hearing is adjourned to reconvene as per the order of the morning.

And thereupon the further taking of testimony herein before the Commissioner was adjourned to reconvene at 10:00 o'clock A. M. on the morning of September 13, 1920, in the office of The Peoples Natural Gas Company, Pittsburgh, Pennsylvania.